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United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service



# Washington Basin Outlook Report February 1, 1996



# Basin Outlook Reports

## and

## Federal - State - Private

## Cooperative Snow Surveys

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### How forecasts are made

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Natural Resources Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

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# Washington Water Supply Outlook

February 1996

## General Outlook

As the old northwest wives tale goes; if you don't like the weather, wait a bit and it will change. Heavy dry snowfall blanketed most of Washington in January. The promise of seasonally normal weather rapidly turned to an arctic blast of record low temperatures. The mercury dropped to 24 degrees below zero on January 31 in Spokane, breaking a 115-year old record. Frigid temperatures carried over to the 3rd of February, then abruptly changed from below normal to above normal. With the warmer temperatures came rain and subsequent flooding. Once again the sand bags and armies of volunteers emerged to attempt to hold back the wrath of raging waters. Short-term Weather forecasts are for unseasonably dry and warmer conditions.

## Streamflow

Forecasts for summer streamflow are for near to above average with a couple of streams forecasted slightly below average. They vary from 128% of average for the Okanogan near Tonasket to 87% of normal for the Rex River near Cedar Falls. February forecasts for some Western Washington streams include: Cedar River near Cedar Falls, 92%; Green River, 99%; and the Dungeness River, 94%. Some Eastern Washington streams include Mill Creek at Walla Walla, 104%; the Wenatchee River at Peshastin, 108%; and the Colville River, 95%. January streamflows varied greatly throughout the state but were all well above normal. The Naches at Naches River was the highest at 243% of average; and the Snake River below Lower Granite Dam, with 137% of normal, was the lowest in the state. Other streamflows were the following percentage of normal: the Cowlitz River, 148%; the Okanogan River, 227%; the Spokane River, 166%; the Columbia at the Canadian border, 158%, and the Yakima River at Kiona, 228%.

### BASIN

PERCENT OF AVERAGE  
MOST PROBABLE FORECAST  
(50 PERCENT CHANCE OF EXCEEDANCE)

|                            |         |
|----------------------------|---------|
| Spokane.....               | 93      |
| Colville-Pend Oreille..... | 95-123  |
| Okanogan-Methow.....       | 92-128  |
| Wenatchee-Chelan.....      | 95-119  |
| Yakima.....                | 98-113  |
| Walla Walla.....           | 104-117 |
| Cowlitz-Lewis.....         | 101-107 |
| White-Green-Cedar.....     | 87-99   |
| North Puget Sound.....     | 91-95   |
| Olympic Peninsula.....     | 88-94   |

## Snowpack

The February 1 statewide SNOTEL reading showed the snowpack to be 91% of average. Snowpack varied across the state, with the Olympic Peninsula River Basin SNOTEL reporting the lowest with 61% of average, and the Methow River Basin staying the highest at 129% of normal. Westside averages from SNOTEL and February 1 snow surveys include the North Puget River Basins with 78% of normal, the Olympic Basins with 61%, and the Lewis-Cowlitz basins with 85% of normal. Snowpack along the east slopes of the Cascade Mountains include the Yakima with 91%, and the Wenatchee with 90%. Snowpack in the Spokane River Basin was at 73%, and the Pend Oreille River Basin, including Canadian data, had 111% of normal. Maximum snow cover was at Lyman Lake SNOTEL in the north-central Cascade Mountains, with a water content of 43.4 inches. This site would normally have 39.0 inches of water content on February 1. High average in the state goes to Spirit Lake SNOTEL near Mt. St. Helens with 166% of normal. At this time last month Spirit Lake had no reportable snowpack. Because of the dry snow conditions that were prevalent in January we are seeing very little meltout at the 45 SNOTEL sites in Washington. However some of the lower elevations are showing decreases and if the current weather conditions persist we could see another round of flooding from the higher elevations.

| BASIN                  | PERCENT OF LAST YEAR | PERCENT OF AVERAGE |
|------------------------|----------------------|--------------------|
| Spokane.....           | 67.....              | 71                 |
| Colville.....          | 72.....              | 79                 |
| Pend Oreille.....      | 115.....             | 110                |
| Okanogan.....          | 91.....              | 113                |
| Methow.....            | 79.....              | 118                |
| Wenatchee.....         | 65.....              | 92                 |
| Chelan.....            | 86.....              | 114                |
| Yakima.....            | 59.....              | 91                 |
| Walla Walla.....       | 69.....              | 92                 |
| Cowlitz.....           | 68.....              | 95                 |
| Lewis.....             | 56.....              | 71                 |
| White.....             | 59.....              | 100                |
| Green.....             | 70.....              | 78                 |
| North Puget Sound..... | 62.....              | 78                 |
| Olympic Peninsula..... | 36.....              | 40                 |

## New SNOTEL Sites

Elbow Lake and Wells Creek sites were installed in August "95" in cooperation with Whatcom County as a component of their new Early Flood Warning System. The new sites, located on the North Fork and South Fork of the Nooksack River, act as the first indicators of potential upper watershed snow melt.

The final two of six new SNOTEL sites were installed in cooperation with Seattle Water Department. Skookum Creek was installed in the headwaters of the Tolt Reservoir, and Rex River site was installed in the Rex River Basin, a tributary of the Cedar River Watershed. All six sites are used by Seattle Water Department for reservoir management.

## Precipitation

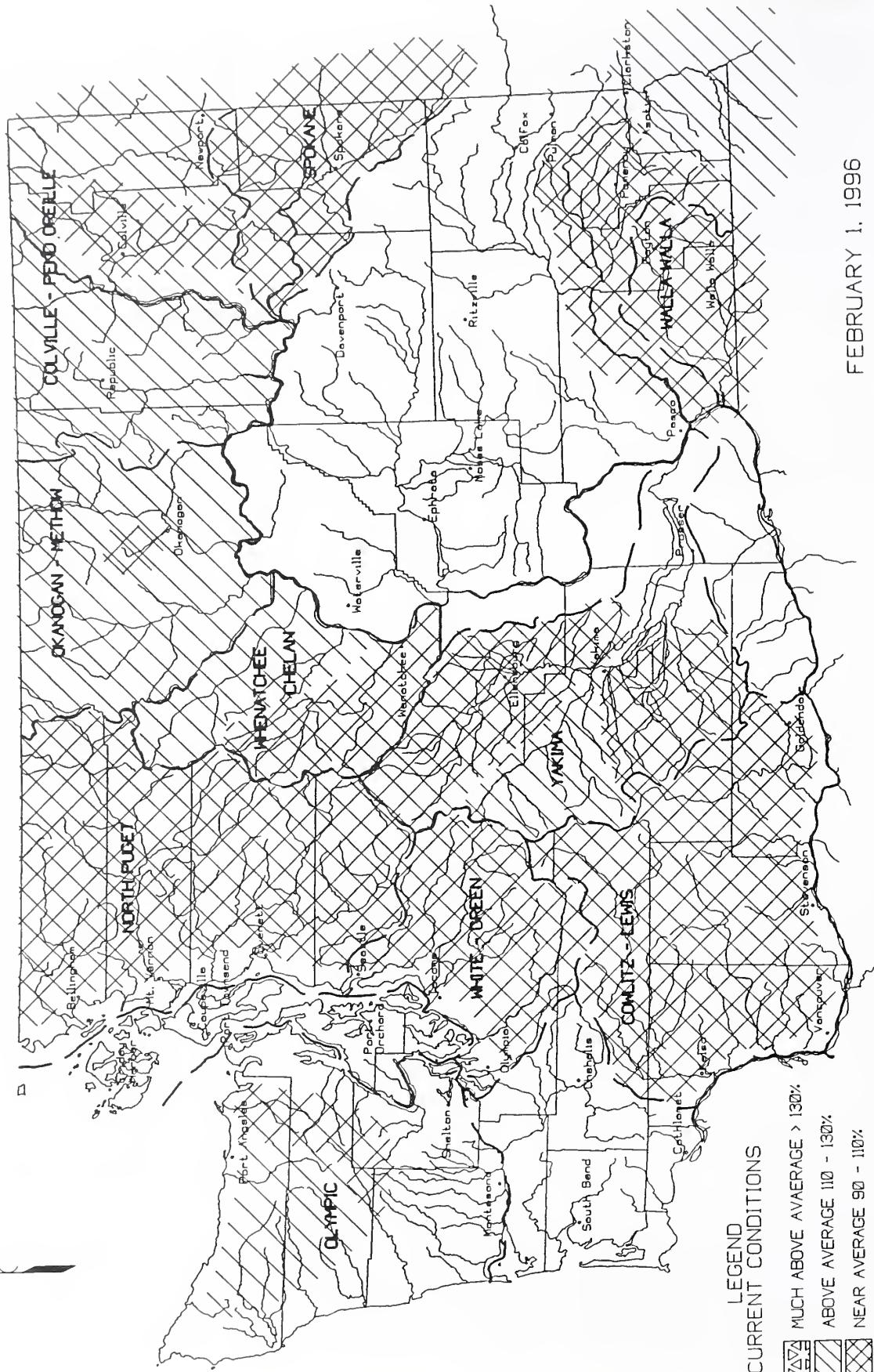
During the month of January the National Weather Service and Natural Resources Conservation Service climate stations showed near to much above normal precipitation across the state. The highest percent of average in the state was at Mill Creek Dam in Walla Walla County, which reported 295% of normal for a total of 6.4 inches. Normal for this site is 2.2 inches for January. Averages for the water year varied from 117% of normal in the Okanogan - Methow River Basins to 163% of normal in the Yakima River basin. The highest average for the year is 217% of normal at Concrete in Skagit County, down from 263% last month.

| BASIN                      | JANUARY<br>PERCENT OF AVERAGE | WATER YEAR<br>PERCENT OF AVERAGE |
|----------------------------|-------------------------------|----------------------------------|
| Spokane.....               | 126.....                      | 137                              |
| Colville-Pend Oreille..... | 104.....                      | 128                              |
| Okanogan-Methow.....       | 102.....                      | 117                              |
| Wenatchee-Chelan.....      | 107.....                      | 143                              |
| Yakima.....                | 129.....                      | 163                              |
| Walla Walla.....           | 93.....                       | 136                              |
| Cowlitz-Lewis.....         | 129.....                      | 154                              |
| White-Green-Cedar.....     | 133.....                      | 156                              |
| North Puget Sound.....     | 108.....                      | 158                              |
| Olympic Peninsula.....     | 96.....                       | 123                              |

## Reservoir

Reservoir storage in Washington remained above average for February 1. Reservoir storage in the Yakima Basin was 816,400 acre feet, 127% of normal. Storage at other reservoirs included Roosevelt at 113% of average, and the Okanogan reservoirs with 128% of normal for February 1. The power generation reservoirs include the following: Coeur d'Alene Lake, 127,500 acre feet, or 100% of normal; Chelan Lake, 572,200 acre feet, 127% of average and 85% of capacity; and Ross Lake at 161% of average and 90% of capacity. Release rates had tapered off considerably from all reservoirs from a month ago however warmer temperatures and increased snowmelt over the past 5-7 days has forced reservoir operators to release large quantities of water in order to maintain emergency holding capacity. Until near normal climatic conditions return we may see dramatic changes in reservoir levels.

| BASIN                      | PERCENT OF CAPACITY | PERCENT OF AVERAGE |
|----------------------------|---------------------|--------------------|
| Spokane.....               | 53.....             | 100                |
| Colville-Pend Oreille..... | 83.....             | 113                |
| Okanogan-Methow.....       | 75.....             | 128                |
| Wenatchee-Chelan.....      | 85.....             | 127                |
| Yakima.....                | 77.....             | 127                |
| North Puget Sound.....     | 85.....             | 114                |

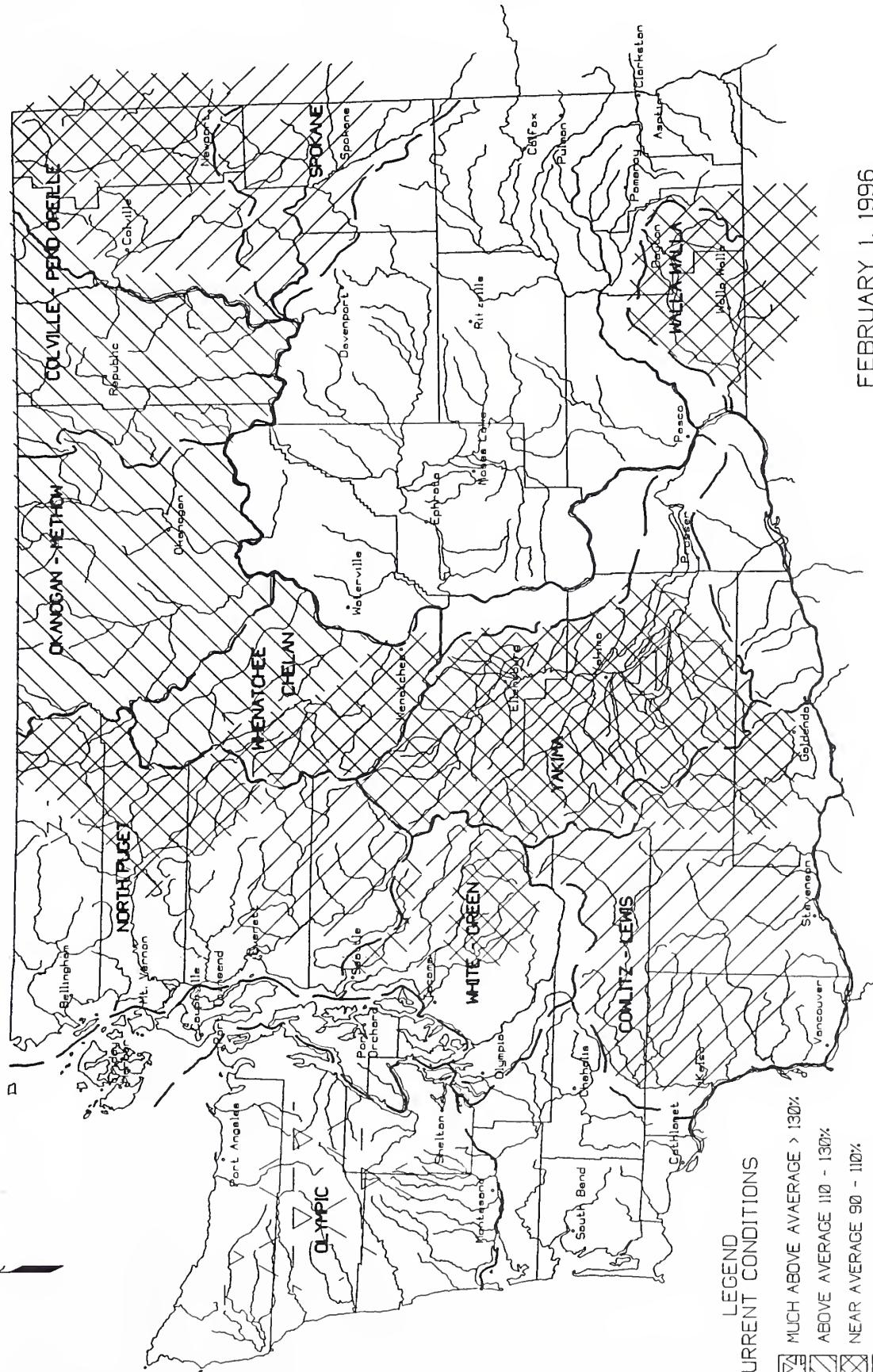


FEBRUARY 1, 1996

**STREAMFLOW PROSPECTS**  
**WASHINGTON**

NTS

US DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE



# MOUNTAIN SNOWPACK WASHINGTON

FEBRUARY 1, 1996

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U. S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

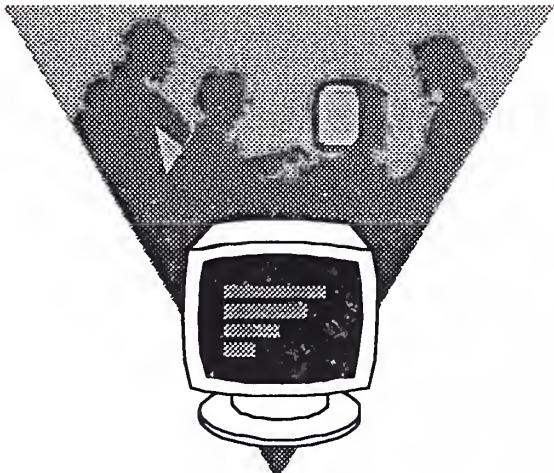
LEGEND  
CURRENT CONDITIONS

|   |                           |
|---|---------------------------|
|  | MUCH ABOVE AVERAGE > 130% |
|  | ABOVE AVERAGE 110 - 130%  |
|  | NEAR AVERAGE 90 - 110%    |
|  | BELOW AVERAGE 70 - 90%    |
|  | MUCH BELOW AVERAGE < 70%  |
|  | NOT FORCASTED             |

B A S I N S U M M A R Y O F  
S N O W C O U R S E D A T A

FEBRUARY 1996

| SNOW COURSE                      | EL E V A T I O N | DATE         | SNOW<br>DEPTH | WATER<br>CONTENT | LAST<br>YEAR | AVERAGE<br>1961-90   | SNOW COURSE                                  | EL E V A T I O N     | DATE       | SNOW<br>DEPTH | WATER<br>CONTENT | LAST<br>YEAR | AVERAGE<br>1961-90 |      |      |      |
|----------------------------------|------------------|--------------|---------------|------------------|--------------|----------------------|--|----------------------|------------|---------------|------------------|--------------|--------------------|------|------|------|
| PEND OREILLE RIVER               |                  |              |               |                  |              |                      | BLEWETT PASS#2 PILLOW                        | 4270                 | 2/01/96    | ---           | 8.05             | 16.8         | 13.6               |      |      |      |
| BENTON MEADOW                    | 2370             | 1/29/96      | 12            | 2.0              | 4.7          | 4.8                  | BUMPING LAKE (NEW)                           | 3400                 | 1/29/96    | 43            | 11.8             | 12.9         | 14.2               |      |      |      |
| BENTON SPRING                    | 4920             | 1/29/96      | 32            | 7.8              | 15.9         | 12.9                 | BUMPING RIDGE PILLOW                         | 4600                 | 2/01/96    | ---           | 14.35            | 22.9         | 13.9               |      |      |      |
| BUNCHGRASS MDW PILLOW            | 5000             | 2/01/96      | ---           | 17.0             | 25.1         | 18.8                 | CAYUSE PASS                                  | 5300                 | 2/01/96    | ---           | 51.8E            | 89.9         | 52.9               |      |      |      |
| HOODOO BASIN                     | 6050             | 2/02/96      | 117           | 35.1             | 29.7         | 33.4                 | COLOCUM PASS                                 | 5370                 | 1/30/96    | 40            | 9.1              | 16.0         | 11.5               |      |      |      |
| HOODOO CREEK                     | 5900             | 2/02/96      | 105           | 29.2             | 25.1         | 30.3                 | CORRAL PASS PILLOW                           | 6000                 | 2/01/96    | ---           | 21.25            | 27.5         | 21.3               |      |      |      |
| LOOKOUT                          | PILLOW           | 5140         | 2/01/96       | ---              | 17.4         | 19.5                 | FISH LAKE                                    | 3370                 | 1/30/96    | 68            | 21.6             | 27.1         | 21.1               |      |      |      |
| NELSON                           | CAN.             | 3100         | 1/29/96       | 35               | 9.3          | 13.9                 | FISH LAKE                                    | 3370                 | 2/01/96    | ---           | 27.15            | 31.6         | 22.0               |      |      |      |
| KETTLE RIVER                     |                  |              |               |                  |              |                      | GREEN LAKE                                   | 6000                 | 2/01/96    | ---           | 22.4E            | 32.2         | 22.6               |      |      |      |
| BARNES CREEK                     | CAN.             | 5300         | 1/30/96       | 59               | 18.9         | 15.1                 | GREEN LAKE                                   | 6000                 | 2/01/96    | ---           | 14.05            | 21.2         | 14.1               |      |      |      |
| BIG WHITE MTN                    | CAN.             | 5510         | 1/28/96       | 53               | 15.2         | 15.9                 | GROUSE CAMP                                  | PILLOW               | 5380       | 2/01/96       | ---              | 11.75        | 22.1               | 13.8 |      |      |
| BUTTE CREEK                      | 4070             | 2/01/96      | ---           | 7.2E             | 8.3          | 6.4                  | DOMMERIE FLATS                               | 2200                 | 1/31/96    | 33            | 6.0              | 9.0          | 7.0                |      |      |      |
| FARRON                           | CAN.             | 4000         | 1/26/96       | 37               | 9.3          | 10.1                 | LOST HORSE                                   | PILLOW               | 5000       | 2/01/96       | ---              | 11.15        | 15.8               | 22.4 |      |      |
| GOAT CREEK                       | 3600             | 1/29/96      | 23            | 4.7              | 6.5          | 5.2                  | MORSE LAKE                                   | PILLOW               | 5400       | 2/01/96       | ---              | 31.15        | 57.6               | 29.6 |      |      |
| SUMMIT G.S.                      | 4600             | 1/29/96      | 26            | 5.0              | 8.3          | 5.6                  | OLALLIE MDWS                                 | PILLOW               | 3960       | 2/01/96       | ---              | 26.5E        | 45.6               | 34.3 |      |      |
| COLVILLE RIVER                   |                  |              |               |                  |              |                      | SASSE RIDGE                                  | PILLOW               | 4200       | 2/01/96       | ---              | 19.25        | 32.6               | 21.6 |      |      |
| BAIRD #2                         | 3220             | 1/29/96      | 21            | 3.3              | 8.8          | --                   | STAMPEDE PASS                                | PILLOW               | 3860       | 2/01/96       | ---              | 22.85        | 48.7               | 28.8 |      |      |
| TOGO                             | 3370             | 2/01/96      | ---           | 6.2E             | 8.6          | 7.8                  | TUNNEL AVENUE                                | 2450                 | 1/30/96    | 49            | 11.6             | 18.4         | 15.4               |      |      |      |
| OMAK LAKE, TWIN LAKES            |                  |              |               |                  |              |                      | WHITE PASS ES                                | PILLOW               | 4500       | 2/01/96       | ---              | 11.95        | 20.7               | 15.5 |      |      |
| MISSION (OMAK)                   | 1150             | 1/27/96      | 39            | 4.0              | --           | --                   | AHTANUM CREEK                                |                      |            |               |                  |              |                    |      |      |      |
| MOSES MTN                        | PILLOW           | 4800         | 2/01/96       | ---              | 14.15        | 13.9                 | AHTANUM R.S.                                 | 3100                 | 2/01/96    | ---           | 6.05             | 36.4         | 5.8                |      |      |      |
| SPOKANE RIVER                    |                  |              |               |                  |              |                      | GREEN LAKE                                   | PILLOW               | 6000       | 2/01/96       | ---              | 14.05        | 21.2               | 14.1 |      |      |
| FOURTH OF JULY SUM               | 3200             | 2/01/96      | 22            | 4.0              | 6.4          | 7.2                  | LOST HORSE                                   | PILLOW               | 5000       | 2/01/96       | ---              | 11.15        | 15.8               | 22.4 |      |      |
| LOST LAKE (d)                    | 6110             | 2/01/96      | ---           | 32.8E            | 36.0         | 37.4                 | MILL CREEK                                   |                      |            |               |                  |              |                    |      |      |      |
| MOSQUITO RDG                     | PILLOW           | 5200         | 2/01/96       | ---              | 19.6         | 26.9                 | HIGH RIDGE                                   | PILLOW               | 4980       | 2/01/96       | ---              | 14.95        | 22.9               | 16.0 |      |      |
| SUNSET                           | PILLOW           | 5540         | 2/01/96       | ---              | 17.3         | 16.9                 | TOUCHET #2                                   | PILLOW               | 5530       | 2/01/96       | ---              | 18.8         | 25.7               | 20.8 |      |      |
| LOOKOUT                          | PILLOW           | 5140         | 2/01/96       | ---              | 17.4         | 19.5                 | LEWIS, COWLITZ RIVERS                        |                      |            |               |                  |              |                    |      |      |      |
| NEWMAN LAKE                      |                  |              |               |                  |              |                      | CAYUSE PASS                                  | 5300                 | 2/01/96    | ---           | 51.8E            | 89.9         | 52.9               |      |      |      |
| QUARTZ PEAK                      | PILLOW           | 4700         | 2/01/96       | ---              | 7.8          | 21.0                 | JUNE LAKE                                    | PILLOW               | 3200       | 2/01/96       | ---              | 16.85        | 35.2               | 28.1 |      |      |
| OKANOGAN-METHOW RIVER BASINS     |                  |              |               |                  |              |                      | LONE PINE                                    | PILLOW               | 3800       | 2/01/96       | ---              | 14.75        | 28.2               | 20.8 |      |      |
| BLACKWALL PEAK                   | CAN.             | 6370         | 2/01/96       | ---              | 23.6         | --                   | PARADISE PARK                                | PILLOW               | 5500       | 2/01/96       | ---              | 40.25        | 56.0               | 38.5 |      |      |
| ENDERBY                          | CAN.             | 6200         | 1/31/96       | 92               | 32.3         | 28.0                 | PIGTAIL PEAK                                 | PILLOW               | 5900       | 2/01/96       | ---              | 36.95        | 47.6               | 30.4 |      |      |
| FREEZEOUT CK. TRAIL              | 3500             | 1/31/96      | 13            | 3.1              | 10.4         | POTATO HILL          | PILLOW                                       | 4500                 | 2/01/96    | ---           | 13.45            | 20.3         | 16.4               |      |      |      |
| GREYBACK RES                     | CAN.             | 5120         | 2/01/96       | 34               | 8.5          | 7.6                  | SHEEP CANYON                                 | PILLOW               | 4050       | 2/01/96       | ---              | 11.65        | 20.9               | 25.2 |      |      |
| HAMILTON HILL                    | CAN.             | 4890         | 1/26/96       | 43               | 14.3         | 9.4                  | SPENCER MDW                                  | PILLOW               | 3400       | 2/01/96       | ---              | 15.45        | 25.4               | 20.0 |      |      |
| HARTS PASS                       |                  | 6500         | 1/31/96       | 94               | 32.6         | 32.6                 | SPIRIT LAKE                                  | PILLOW               | 3100       | 2/01/96       | ---              | 10.65        | 2.4                | 6.4  |      |      |
| HARTS PASS                       | PILLOW           | 6500         | 2/01/96       | ---              | 35.8S        | 35.5                 | SURPRISE LKS                                 | PILLOW               | 4250       | 2/01/96       | ---              | 23.65        | 36.3               | 30.4 |      |      |
| ISINTOK LAKE                     | CAN.             | 5500         | 1/31/96       | 27               | 6.3          | 5.4                  | WHITE PASS ES                                | PILLOW               | 4500       | 2/01/96       | ---              | 11.95        | 20.7               | 15.5 |      |      |
| LOST HORSE MTN                   | CAN.             | 6300         | 2/01/96       | 32               | 8.3          | 7.0                  | WHITE, GREEN, CEDAR RIVERS                   |                      |            |               |                  |              |                    |      |      |      |
| MCCULLOCH                        | CAN.             | 4200         | 1/30/96       | 24               | 5.4          | 6.0                  | CAYUSE PASS                                  | 5300                 | 2/01/96    | ---           | 51.8E            | 89.9         | 52.9               |      |      |      |
| MISSEZULA MTN                    | CAN.             | 5090         | 1/27/96       | 31               | 7.6          | 9.6                  | CORRAL PASS                                  | PILLOW               | 6000       | 2/01/96       | ---              | 21.6E        | 29.5               | 21.7 |      |      |
| MISSION CREEK                    | CAN.             | 5800         | 2/01/96       | ---              | 12.4         | --                   | 2/01/96                                      | ---                  | 21.25      | 27.5          | 21.3             |              |                    |      |      |      |
| MT. KOBIA                        | CAN.             | 5900         | 1/28/96       | 33               | 8.3          | 10.2                 | MORSE LAKE                                   | PILLOW               | 5400       | 2/01/96       | ---              | 31.15        | 57.6               | 29.6 |      |      |
| MUTTON CREEK #1                  | 5700             | 1/30/96      | 33            | 8.7              | 14.7         | 9.2                  | GRASS MOUNTAIN #2                            | 2900                 | 2/01/96    | ---           | 10.95            | 13.8         | 15.0               |      |      |      |
| OYAMA LAKE                       | CAN.             | 4400         | 1/29/96       | 26               | 6.2          | --                   | LESTER CREEK                                 | 3100                 | 2/01/96    | ---           | 8.2E             | .0           | 10.3               |      |      |      |
| POSTILL LAKE                     | CAN.             | 4500         | 1/30/96       | 30               | 7.3          | 6.2                  | LYNN LAKE                                    | 4000                 | 2/01/96    | ---           | 11.1E            | 16.2         | 14.8               |      |      |      |
| RUSTY CREEK                      |                  | 4000         | 1/30/96       | 22               | 5.2          | 8.6                  | SAWMILL RIDGE                                | 4700                 | 2/01/96    | ---           | 19.1E            | 26.1         | 23.9               |      |      |      |
| SALMON MDWS                      | PILLOW           | 4500         | 2/01/96       | ---              | 6.5S         | 12.7                 | STAMPEDE PASS                                | PILLOW               | 3860       | 2/01/96       | ---              | 22.85        | 48.7               | 28.8 |      |      |
| SILVER STAR MTN                  | CAN.             | 6000         | 1/27/96       | 74               | 24.3         | 21.8                 | MT. GARDNER                                  | PILLOW               | 2860       | 2/01/96       | ---              | 9.25         | 12.5               | 9.6  |      |      |
| SUMMERLAND RES                   | CAN.             | 4200         | 1/30/96       | 33               | 8.3          | 8.4                  | TINKHAM CREEK                                | PILLOW               | 3000       | 2/01/96       | ---              | 17.15        | 23.5               | 12.9 |      |      |
| SUNDAY SUMMIT                    | CAN.             | 4300         | 1/30/96       | 20               | 5.1          | 3.6                  | MEADOWS PASS                                 | PILLOW               | 3240       | 2/01/96       | ---              | 11.75        | 17.7               | 16.2 |      |      |
| TROUT CREEK                      | CAN.             | 4690         | 2/03/96       | 29               | 7.0          | 6.0                  | SNOWQUALMIE, SKYKOMISH, SKAGIT, BAKER RIVERS |                      |            |               |                  |              |                    |      |      |      |
| WHITE ROCKS MTN                  | CAN.             | 6000         | 2/02/96       | 48               | 14.2         | 19.8                 | OLALLIE MDWS                                 | PILLOW               | 3960       | 2/01/96       | ---              | 26.5E        | 45.6               | 34.3 |      |      |
| HARTS PASS                       |                  | 6500         | 1/31/96       | 94               | 32.6         | 32.6                 | STAMPEDE PASS                                | PILLOW               | 3860       | 2/01/96       | ---              | 22.85        | 48.7               | 28.8 |      |      |
| HARTS PASS                       | PILLOW           | 6500         | 2/01/96       | ---              | 35.8S        | 35.5                 | STEVENS PASS                                 | PILLOW               | 4070       | 2/01/96       | ---              | 23.45        | 40.3               | 27.3 |      |      |
| MUTTON CREEK #1                  | 5700             | 1/30/96      | 33            | 8.7              | 14.7         | STEVENS PASS SAND SD | 3700   | 1/30/96              | 60         | 15.3          | 30.6             | 23.9         |                    |      |      |      |
| RUSTY CREEK                      |                  | 4000         | 1/30/96       | 22               | 5.2          | 8.6                  | BEAVER CREEK TRAIL                           | 2200                 | 1/30/96    | 26            | 5.8              | 12.2         | 9.7                |      |      |      |
| SALMON MDWS                      | PILLOW           | 4500         | 2/01/96       | ---              | 6.5S         | 12.7                 | BEAVER PASS                                  |                      | 3680       | 1/29/96       | 31               | 7.7          | 24.7               |      |      |      |
| CHELAN, ENTIAT, WENATCHEE BASINS |                  |              |               |                  |              |                      | BROWN TOP                                    | AM                   | 6000       | 1/29/96       | 110              | 36.0         | 45.8               |      |      |      |
| CLOUDY PASS                      | AM               | 6500         | 2/01/96       | ---              | 30.9E        | 45.2                 | CLOUDY PASS                                  | AM                   | 6500       | 2/01/96       | ---              | 30.9E        | 45.2               | 27.1 |      |      |
| LYMAN LAKE                       | PILLOW           | 5900         | 2/01/96       | ---              | 43.45        | 54.2                 | DEVILS PARK                                  |                      | 5900       | 1/29/96       | 91               | 30.0         | 32.4               | 30.3 |      |      |
| MINERS RIDGE                     | PILLOW           | 6200         | 2/01/96       | ---              | 35.9S        | 39.3                 | FREEZEOUT CK. TRAIL                          |                      | 3500       | 1/31/96       | 13               | 3.1          | 10.4               | 8.8  |      |      |
| PARK CK RIDGE                    | PILLOW           | 4600         | 2/01/96       | ---              | 35.6S        | 33.0                 | HARTS PASS                                   |                      | 6500       | 1/31/96       | 94               | 32.6         | 32.6               |      |      |      |
| RAINY PASS                       |                  | 4780         | 1/30/96       | 68               | 20.8         | 24.5                 | HARTS PASS                                   | PILLOW               | 6500       | 2/01/96       | ---              | 35.8S        | 35.5               | 27.7 |      |      |
| RAINY PASS                       | PILLOW           | 4780         | 2/01/96       | ---              | 36.5S        | 39.7                 | KLESILKWA                                    | CAN.                 | 3710       | 2/01/96       | 12               | 2.4          | 4.9                | 9.3  |      |      |
| BRIEF                            |                  | 1600         | 1/28/96       | 26               | 6.4          | 9.8                  | LYMAN LAKE                                   | PILLOW               | 5900       | 2/01/96       | ---              | 43.4S        | 54.2               | 39.0 |      |      |
| POPE RIDGE                       | PILLOW           | 3540         | 2/01/96       | ---              | 17.1S        | 21.5                 | MEADOWS CABIN                                |                      | 1900       | 1/30/96       | 12               | 2.1          | 2.3                | 5.4  |      |      |
| BERNE-MILL CREEK (d)             | 3170             | 1/30/96      | 56            | 15.3             | 25.2         | 19.9                 | NEW HOZOMEEN LAKE                            |                      | 2800       | 1/29/96       | 15               | 3.7          | 6.3                | 8.0  |      |      |
| BLEWETT PASS #2                  | 4270             | 1/29/96      | 39            | 7.7              | 15.9         | 11.6                 | RAINY PASS                                   | PILLOW               | 4780       | 1/30/96       | 68               | 20.8         | 32.6               | 27.7 |      |      |
| BLEWETT PASS#2PILLOW             | 4270             | 2/01/96      | ---           | 8.0S             | 16.8         | 13.6                 | RAINY PASS                                   | PILLOW               | 4780       | 2/01/96       | ---              | 36.5S        | 39.7               | 24.5 |      |      |
| CHIWAUKUM G.S.                   |                  | 2500         | 1/30/96       | 34               | 7.4          | 12.8                 | THUNDER BASIN                                |                      | 4200       | 1/30/96       | 40               | 10.6         | 17.6               | 25.3 |      |      |
| FISH LAKE                        | PILLOW           | 3370         | 2/01/96       | ---              | 27.1S        | 31.6                 | 22.0   | THUNDER BASIN PILLOW | 4200       | 2/01/96       | ---              | 20.7S        | 25.7               | --   |      |      |
| LYMAN LAKE                       | PILLOW           | 5900         | 2/01/96       | ---              | 43.45        | 54.2                 | 39.0   | DOCK BUTTE           | AM         | 3800          | 1/30/96          | 60           | 23.0               | 43.0 | 41.1 |      |
| MERRITT                          |                  | 2140         | 1/30/96       | 40               | 9.3          | 16.0                 | EASY PASS                                    | AM                   | 5200       | 1/30/96       | 92               | 37.0         | 66.0               | 45.6 |      |      |
| STEVENS PASS                     | PILLOW           | 4070         | 2/01/96       | ---              | 23.45        | 40.3                 | JASPER PASS                                  | AM                   | 5400       | 1/30/96       | 120              | 43.0         | 66.0               | 58.8 |      |      |
| STEVENS PASS SAND SD             |                  | 3700         | 1/30/96       | 60               | 15.3         | 30.6                 | MARTEN LAKE                                  | AM                   | 3600       | 1/30/96       | 70               | 27.0         | 52.0               | 48.2 |      |      |
| TROUGH #2                        | PILLOW           | 5310         | 2/01/96       | ---              | 6.6S         | 14.6                 | 6.4  | MT. BLUM             | AM         | 5800          | 1/30/96          | 80           | 29.0               | 45.0 | 41.3 |      |
| UPPER WHEELER                    |                  | 4400         | 1/27/96       | 22               | 5.2          | 8.5                  | ROCKY CREEK                                  | AM                   | 2100       | 1/30/96       | 40               | 13.0         | 25.0               | 20.0 |      |      |
| UPPER WHEELER PILLOW             | 4400             | 2/01/96      | ---           | 9.4S             | 13.0         | 9.3                  | SCHREIBERS MDW                               | AM                   | 3400       | 1/30/96       | 58               | 21.0         | 38.0               | 35.1 |      |      |
| STEMILT SLIDE                    |                  | 5000         | 1/27/96       | 35               | 8.0          | 13.7                 | SF THUNDER CK                                | AM                   | 2200       | 1/30/96       | 20               | 7.0          | .0                 | 6.2  |      |      |
| UPPER WHEELER                    |                  | 4400         | 1/27/96       | 22               | 5.2          | 8.5                  | WATSON LAKES                                 | AM                   | 4500       | 1/30/96       | 62               | 22.0         | 33.0               | 38.7 |      |      |
| UPPER WHEELER PILLOW             | 4400             | 2/01/96      | ---           | 9.4S             | 13.0         | 9.3                  | ELWAHA, MORSE, DUNGENESS, QUILCENE RIVERS    |                      |            |               |                  |              |                    |      |      |      |
| COLOCUM CREEK                    |                  | TROUGH #2    | PILLOW        | 5310             | 2/01/96      | ---                  | 6.6S   | 14.6                 | 6.4        | HURRICANE     | 4500             | 1/28/96      | 18                 | 3.0  | 12.0 | 13.7 |
| YAKIMA RIVER                     |                  | AHTANUM R.S. | 3100          | 2/01/96          | ---          | 6.0E                 | 36.4   | 5.8                  | COX VALLEY | 4500          | 1/29/96          | 45</td       |                    |      |      |      |



# **SNOW SURVEY OFFERS INTERNET HOMEPAGE**

*On February 1, the Water and Climate Center (WCC) began providing Snow Survey and Water Supply Forecasting products on the INTERNET. A few of our more popular products (SNOWTEL Update Reports, State Basin Outlook Reports, and products previously published in the Water Supply Outlook for the Western United States) are now accessible via our new Home Page and our Anonymous FTP server.*

The Universal Resource Locator (URL) for the home page is:

**<http://www.wcc.nrcs.usda.gov/>**

The address for the Anonymous FTP server is:

**[ftp.wcc.nrcs.usda.gov](ftp://ftp.wcc.nrcs.usda.gov)**

You can access the Anonymous FTP server using your INTERNET browser (Netscape, Mosaic, etc.) by changing the URL to:

**<ftp://ftp.wcc.nrcs.usda.gov/>**

*We will continue to add more products to the Home Page and Anonymous FTP server and welcome any comments and suggestions you might have.*

*Questions and comments should be directed to the NRCS Snow Survey and Water Supply Forecasting contact in your state or in Portland:*

Scott Pattee (509)353-2341 [shp@wa1.wa.nrcs.usda.gov](mailto:shp@wa1.wa.nrcs.usda.gov)

Chris Pacheco (503) 414-3056 [a16cpacheco@attmail.com](mailto:a16cpacheco@attmail.com)

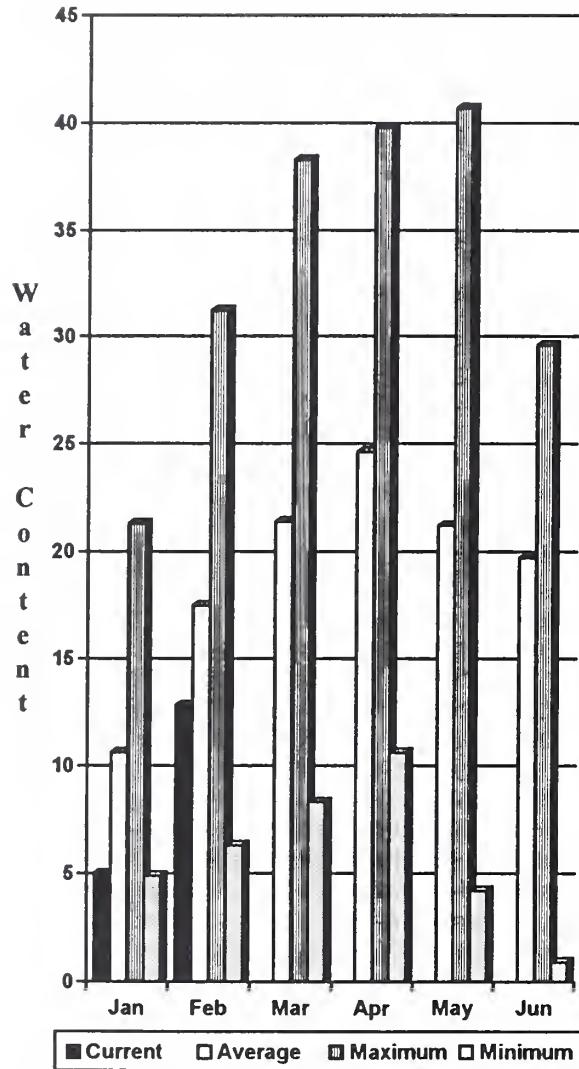
Jim Marron (503) 414-3047 [a16jmarron@attmail.com](mailto:a16jmarron@attmail.com)

Natural Resources Conservation Service  
W 316 Boone, Suite 450  
Spokane, WA 99201

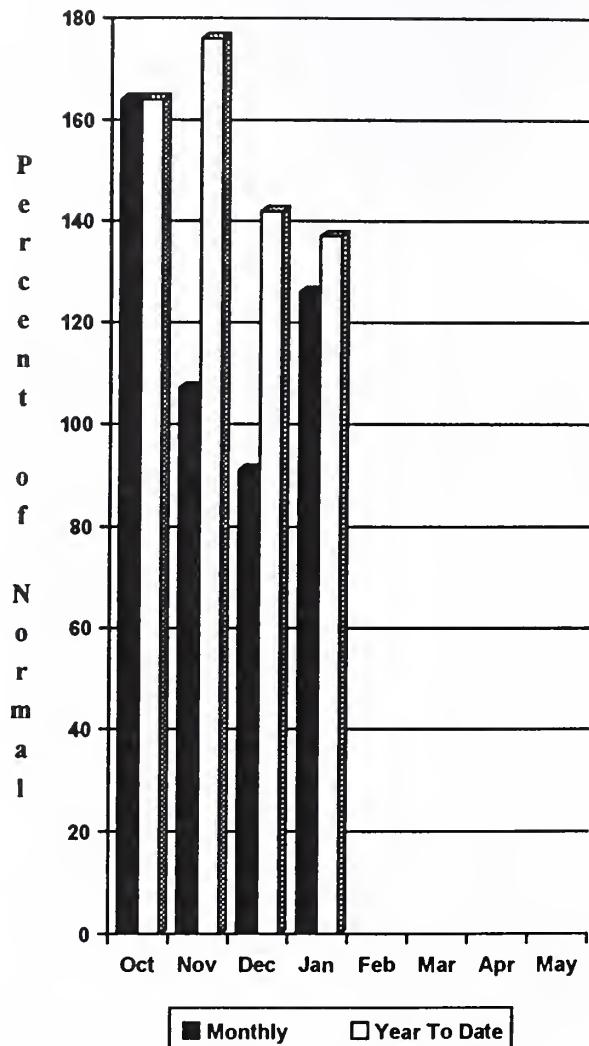
Natural Resources Conservation Service  
Water and Climate Center  
101 SW Main Street, Suite 1600  
Portland, OR 97204-3224

# Spokane River Basin

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

The February 1 forecasts for summer runoff within the Spokane River Basin are 93-94% of normal, about the same as last year at this time. The forecast is based on a basin snowpack that is 73% of average and precipitation that is 137% of normal for the water year. Precipitation for January was 126% of average. Streamflow on the Spokane River was 166% of average for January. February 1 storage in Coeur d'Alene Lake was 127,500 acre feet, 113% of normal, and 53% of capacity.

For more information contact your local Natural Resources Conservation Service office.

**SPOKANE RIVER BASIN**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point              | Forecast Period | Future Conditions |                 |                                 |          |                 |                 | 30-Yr Avg. |  |
|-----------------------------|-----------------|-------------------|-----------------|---------------------------------|----------|-----------------|-----------------|------------|--|
|                             |                 | <---- Drier ----> |                 | Chance Of Exceeding *           |          | Wetter ---->    |                 |            |  |
|                             |                 | 90%<br>(1000AF)   | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | (% AVG.) | 30%<br>(1000AF) | 10%<br>(1000AF) |            |  |
| SPOKANE near Post Falls (2) | APR-SEP         | 1891              | 2283            | 2550                            | 93       | 2817            | 3209            | 2730       |  |
|                             | APR-JUL         | 1810              | 2197            | 2460                            | 93       | 2723            | 3110            | 2633       |  |
| SPOKANE at Long Lake        | APR-JUL         | 2055              | 2469            | 2750                            | 94       | 3031            | 3445            | 2936       |  |
|                             | APR-SEP         | 2241              | 2669            | 2960                            | 94       | 3251            | 3679            | 3159       |  |

| SPOKANE RIVER BASIN                          |                 |                        |           | SPOKANE RIVER BASIN                            |                   |         |  |
|--|-----------------|------------------------|-----------|--|-------------------|---------|--|
| Reservoir Storage (1000 AF) - End of January |                 |                        |           | Watershed Snowpack Analysis - February 1, 1996 |                   |         |  |
| Reservoir                                    | Usable Capacity | *** Usable Storage *** | Watershed | Number of Data Sites                           | This Year as % of |         |  |
|  | This Year       | Last Year              | Avg       |  | Last Yr           | Average |  |

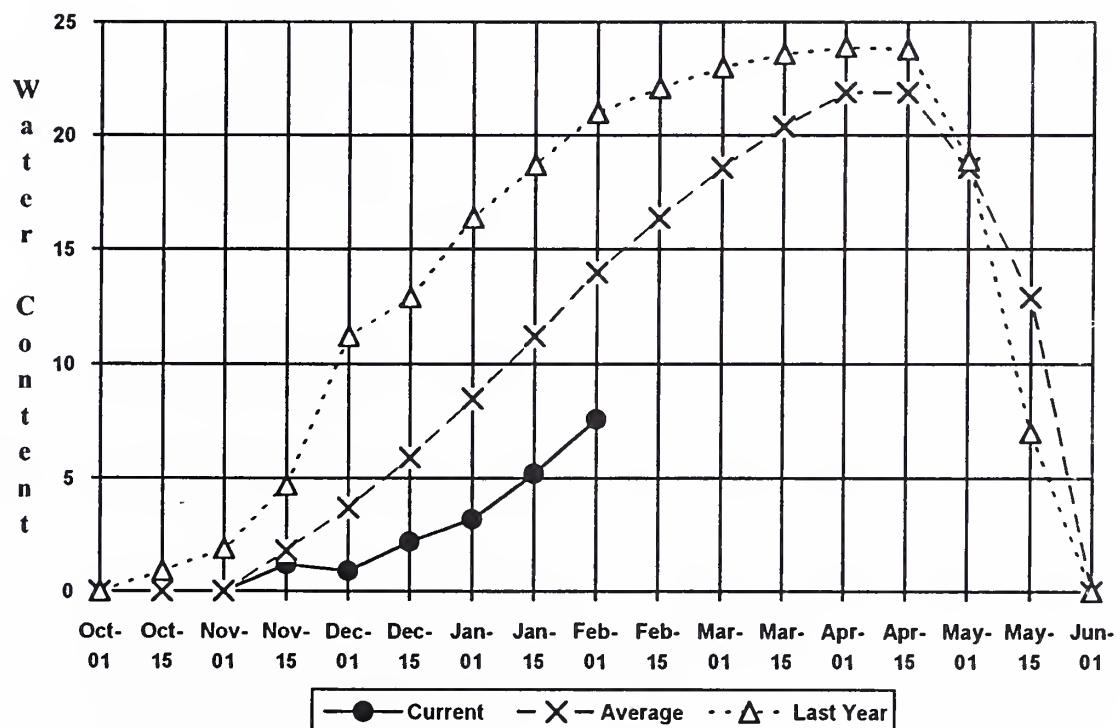
|               |       |       |       |       |               |    |    |    |
|---------------|-------|-------|-------|-------|---------------|----|----|----|
| COEUR D'ALENE | 238.5 | 127.5 | 116.5 | 127.8 | Spokane River | 12 | 67 | 73 |
|---------------|-------|-------|-------|-------|---------------|----|----|----|

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

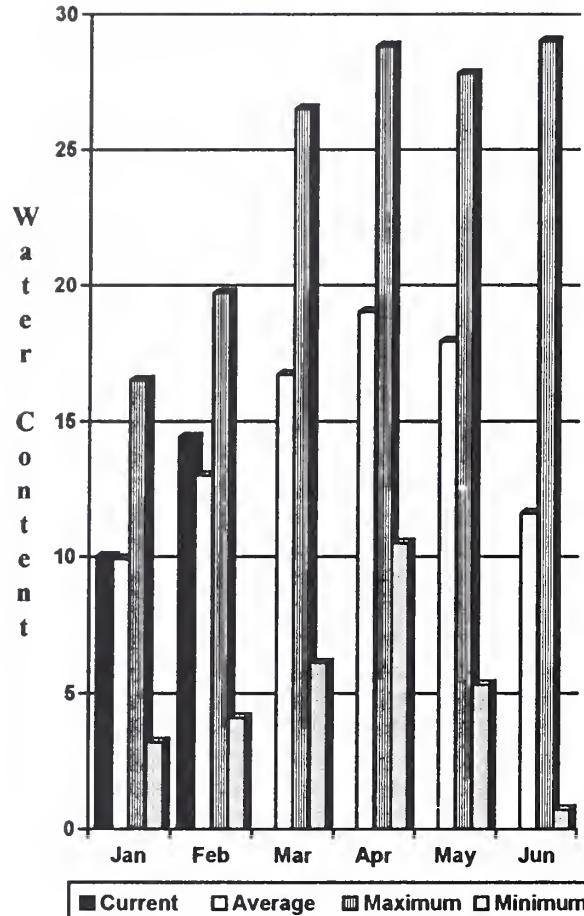
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
(2) - The value is natural flow - actual flow may be affected by upstream water management.

**Quartz Peak SNOTEL**  
**Elevation 4700 ft.**

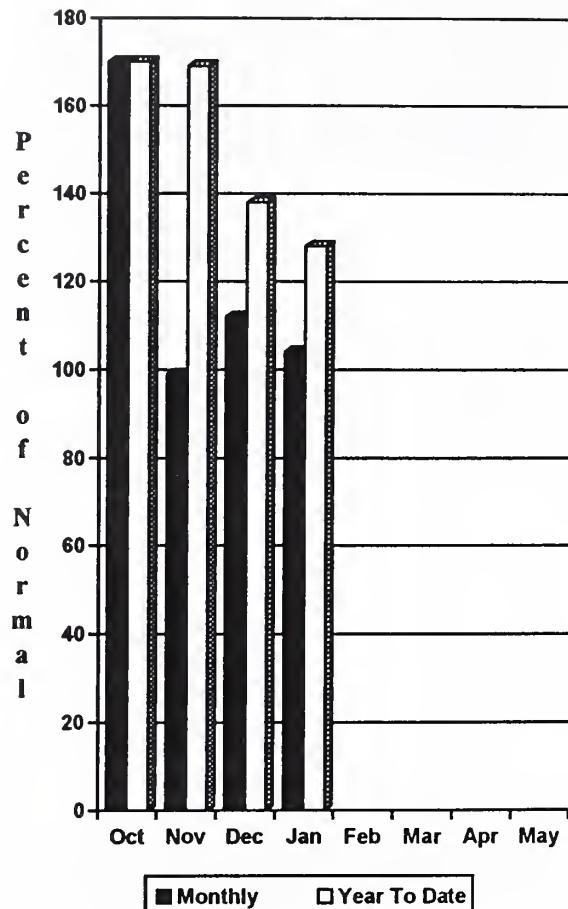


## Colville - Pend Oreille River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

The forecast for the Kettle River streamflow is for 123% of normal; the Pend Oreille, below Box Canyon, 116%; Priest River, near the town of Priest River, 108% of normal for the summer runoff period. Forecast for the Columbia River at Birchbank is for runoff to be 117% of average. January streamflow was 158% of normal on the Pend Oreille River, 158% on the Columbia at the International Boundary, and 236% on the Kettle River. February 1 snow cover was 111% of normal in the Pend Oreille Basin, and 113% for the Kettle River Basin. Precipitation during January was 104% of average, bringing the water year-to-date to 128% of normal.

# COLVILLE - PEND OREILLE RIVER BASINS

Streamflow Forecasts - February 1, 1996

| Forecast Point                    | Forecast Period | Future Conditions |              |                              |          |              |              |                     |  |
|-----------------------------------|-----------------|-------------------|--------------|------------------------------|----------|--------------|--------------|---------------------|--|
|                                   |                 | << Drier          |              | Chance Of Exceeding *        |          |              |              | >> Wetter           |  |
|                                   |                 | 90% (1000AF)      | 70% (1000AF) | 50% (Most Probable) (1000AF) | (% AVG.) | 30% (1000AF) | 10% (1000AF) | 30-Yr Avg. (1000AF) |  |
| PEND OREILLE Lake Inflow (1,2)    | APR-JUL         | 11578             | 14206        | 15400                        | 117      | 16594        | 19222        | 13150               |  |
|                                   | APR-SEP         | 12620             | 15495        | 16800                        | 117      | 18105        | 20980        | 14370               |  |
|                                   | APR-JUN         | 9692              | 12173        | 13300                        | 117      | 14427        | 16908        | 11390               |  |
| PRIEST nr Priest River (1,2)      | APR-JUL         | 602               | 790          | 875                          | 107      | 960          | 1148         | 814                 |  |
|                                   | APR-SEP         | 643               | 844          | 935                          | 108      | 1026         | 1227         | 868                 |  |
| PEND OREILLE b1 Box Canyon (1,2)  | APR-JUL         | 12025             | 14415        | 15500                        | 116      | 16585        | 18975        | 13380               |  |
|                                   | APR-SEP         | 13107             | 15715        | 16900                        | 116      | 18085        | 20693        | 14590               |  |
|                                   | APR-JUN         | 10410             | 12466        | 13400                        | 116      | 14334        | 16390        | 11570               |  |
| CHAMOKANE CK nr Long Lake         | MAY-AUG         | 1.48              | 5.68         | 8.48                         | 9        | 11.28        | 15.48        | 9.40                |  |
| COLVILLE at Kettle Falls          | APR-SEP         | 67                | 101          | 124                          | 95       | 147          | 181          | 131                 |  |
|                                   | APR-JUL         | 60                | 92           | 113                          | 94       | 134          | 166          | 120                 |  |
|                                   | APR-JUN         | 57                | 86           | 105                          | 95       | 124          | 153          | 111                 |  |
| KETTLE near Laurier               | APR-SEP         | 1915              | 2132         | 2280                         | 123      | 2428         | 2645         | 1854                |  |
|                                   | APR-JUL         | 1838              | 2035         | 2170                         | 123      | 2305         | 2502         | 1761                |  |
|                                   | APR-JUN         | 1694              | 1864         | 1980                         | 125      | 2096         | 2266         | 1585                |  |
| COLUMBIA at Birchbank (1,2)       | APR-JUL         | 35217             | 39194        | 41000                        | 117      | 42806        | 46783        | 35140               |  |
|                                   | APR-SEP         | 43856             | 48837        | 51100                        | 117      | 53363        | 58344        | 43810               |  |
|                                   | APR-JUN         | 25814             | 28692        | 30000                        | 117      | 31308        | 34186        | 25670               |  |
| COLUMBIA at Grand Coulee Dm (1,2) | APR-SEP         | 63034             | 71607        | 75500                        | 116      | 79393        | 87966        | 64850               |  |
|                                   | APR-JUL         | 52846             | 60035        | 63300                        | 116      | 66565        | 73754        | 54543               |  |
|                                   | APR-JUN         | 41856             | 47457        | 50000                        | 117      | 52543        | 58144        | 42756               |  |

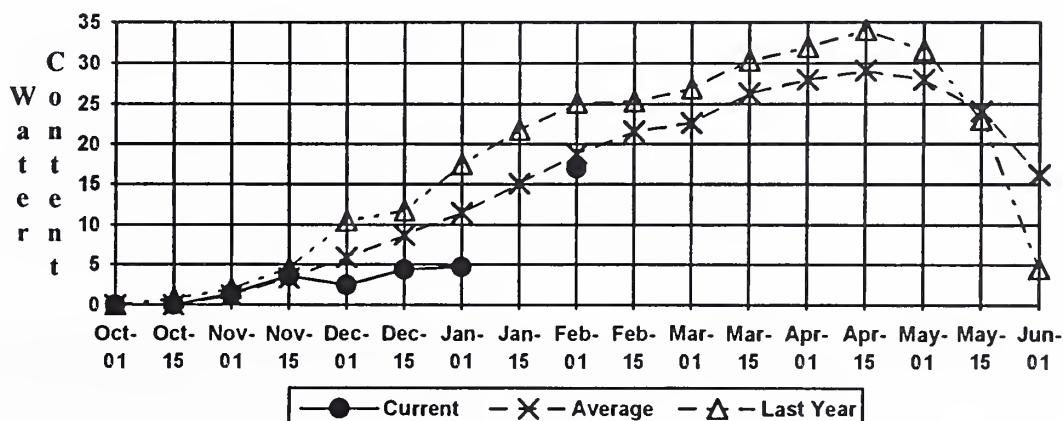
| COLVILLE - PEND OREILLE RIVER BASINS<br>Reservoir Storage (1000 AF) - End of January |                 |                    |           | COLVILLE - PEND OREILLE RIVER BASINS<br>Watershed Snowpack Analysis - February 1, 1996 |                    |                      |                                   |
|--|-----------------|--------------------|-----------|--|--------------------|----------------------|-----------------------------------|
| Reservoir  | Usable Capacity | Usable Storage *** |           |  | Watershed          | Number of Data Sites | This Year as % of Last Yr Average |
|  | Year            | This Year          | Last Year | Avg  |                    |                      |                                   |
| ROOSEVELT  | 5232.0          | 4247.3             | 3898.2    | 3749.0   | Colville River     | 1                    | 72                                |
| BANKS  | 715.0           | 664.2              | 151.2     | 599.0  | Pend Oreille River | 66                   | 116                               |
|  |                 |                    |           |  | Kettle River       | 6                    | 94                                |
|  |                 |                    |           |  |                    |                      | 113                               |

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

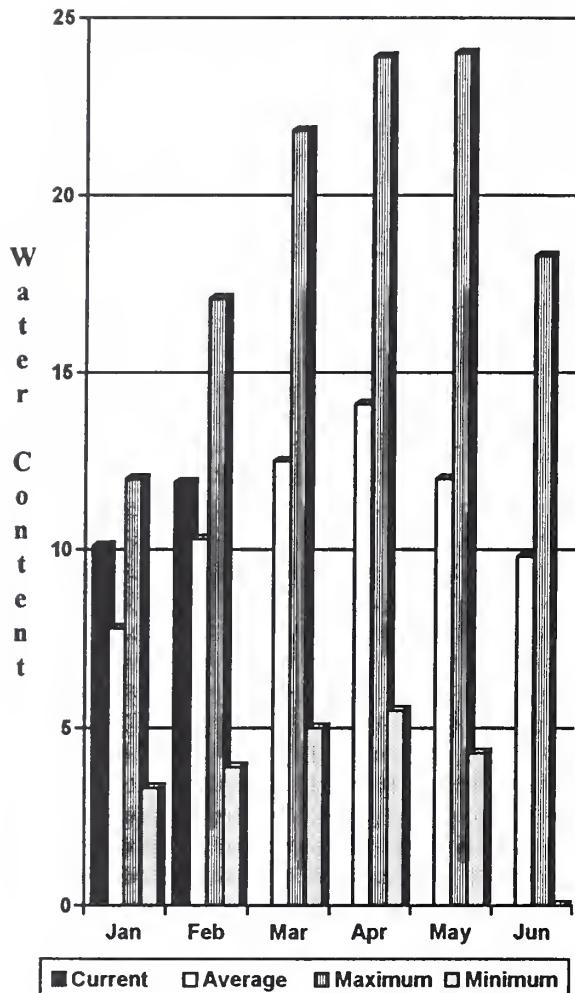
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

## Bunchgrass Meadow SNOTEL Elevation 5000 ft.

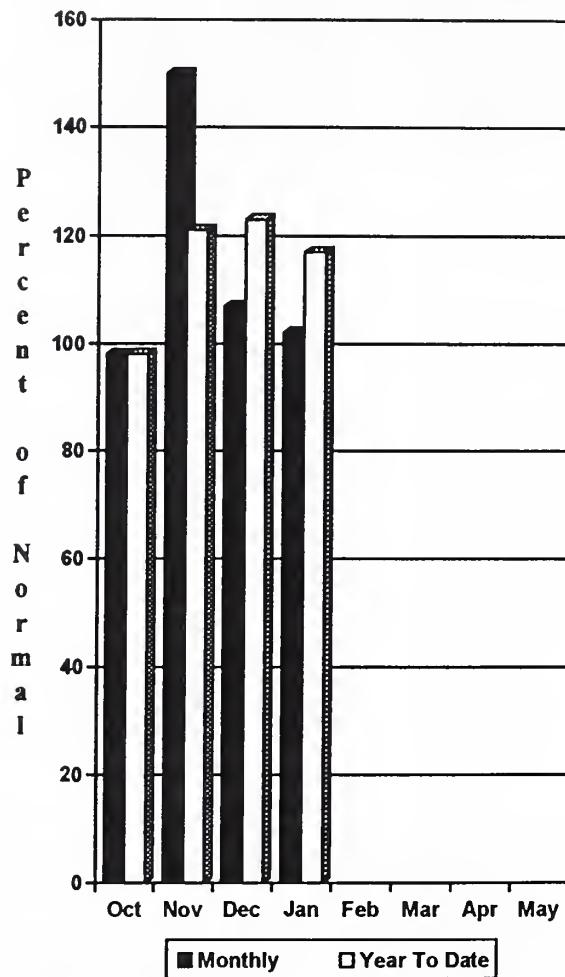


## Okanogan - Methow River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

Summer runoff forecast for the Okanogan River is 128% of normal; the Similkameen River, 125%, the Methow River, 126%, and Salmon Creek, 92% of normal. February 1 snow cover on the Okanogan was 114% of normal, and the Methow, 118%. January precipitation in the Okanogan-Methow was 102% of normal, with water year-to-date at 117% of average. January streamflow on the Methow River was 149% of normal, 227% on the Okanogan River, and 226% on the Similkameen. Snow-water-content at the Harts Pass SNOTEL, elevation 6,500 feet, was 35.8 inches; normal for this site is 27.7 inches. Storage in the Conconully Reservoirs was 17,700 acre feet, which is 75% of capacity and 1128% of the February 1 average.

*For more information contact your local Natural Resources Conservation Service office.*

**OKANOGAN - METHOW RIVER BASINS**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point                 | Forecast Period | Future Conditions  |                 |                                 |        |                 |                 | 30-Yr Avg. |
|--------------------------------|-----------------|--------------------|-----------------|---------------------------------|--------|-----------------|-----------------|------------|
|                                |                 | <===== Drier ===== |                 | Chance Of Exceeding *           |        |                 | Wetter =====>   |            |
|                                |                 | 90%<br>(1000AF)    | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | % AVG. | 30%<br>(1000AF) | 10%<br>(1000AF) |            |
| S1MILKAMEEN nr Nighthawk (1)   | APR-SEP         | 1161               | 1655            | 1750                            | 125    | 1845            | 2392            | 1399       |
|                                | APR-JUL         | 1344               | 1541            | 1630                            | 125    | 1719            | 1916            | 1304       |
|                                | APR-JUN         | 1150               | 1315            | 1390                            | 125    | 1465            | 1630            | 1113       |
| OKANOGAN RIVER nr Tonasket (1) | APR-SEP         | 1348               | 1872            | 2080                            | 128    | 2288            | 2712            | 1624       |
|                                | APR-JUL         | 1290               | 1696            | 1880                            | 128    | 2064            | 2470            | 1467       |
|                                | APR-JUN         | 1133               | 1440            | 1580                            | 128    | 1720            | 2027            | 1234       |
| SALMON CREEK near Conconully   | APR-JUL         | 5.3                | 12.6            | 17.6                            | 92     | 23              | 30              | 19.1       |
|                                | APR-SEP         | 5.9                | 13.3            | 18.4                            | 92     | 24              | 31              | 20         |
| METHOW RIVER near Pateros      | APR-SEP         | 1000               | 1113            | 1190                            | 126    | 1267            | 1380            | 942        |
|                                | APR-JUL         | 929                | 1031            | 1100                            | 126    | 1169            | 1271            | 873        |
|                                | APR-JUN         | 789                | 879             | 940                             | 126    | 1001            | 1091            | 746        |

**OKANOGAN - METHOW RIVER BASINS**  
**Reservoir Storage (1000 AF) - End of January** | **OKANOGAN - METHOW RIVER BASINS**  
**Watershed Snowpack Analysis - February 1, 1996**

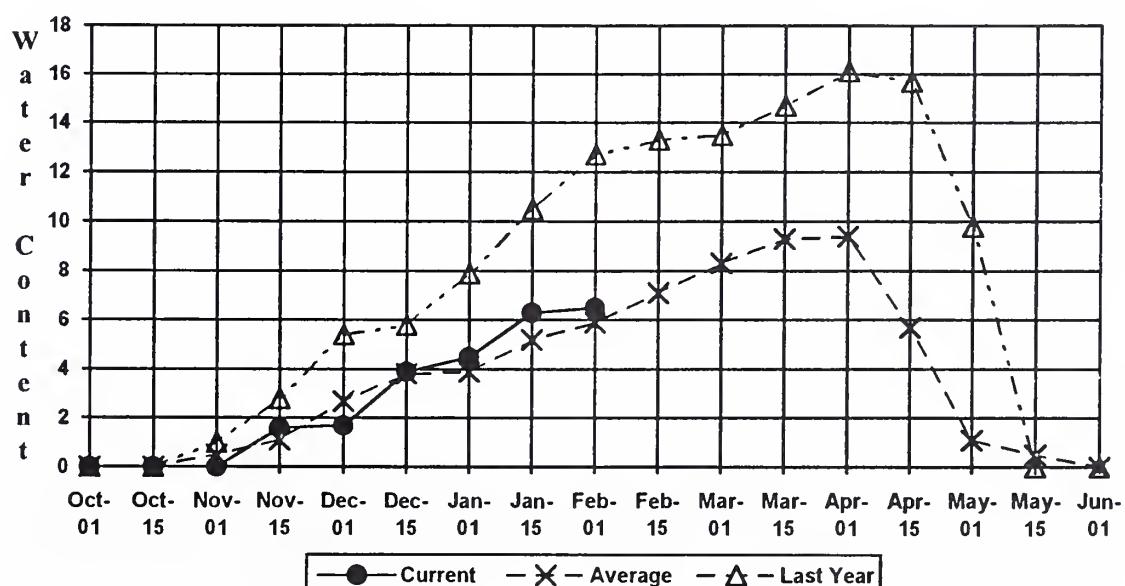
| Reservoir            | Usable Capacity | *** Usable Storage *** |           |     | Watershed      | Number of Data Sites | This Year as % of Last Yr | Average |
|----------------------|-----------------|------------------------|-----------|-----|----------------|----------------------|---------------------------|---------|
|                      |                 | This Year              | Last Year | Avg |                |                      |                           |         |
| SALMON LAKE          | NO REPORT       |                        |           |     | Okanogan River | 19                   | 94                        | 114     |
| CONCONULLY RESERVOIR | NO REPORT       |                        |           |     | Methow River   | 4                    | 79                        | 118     |

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

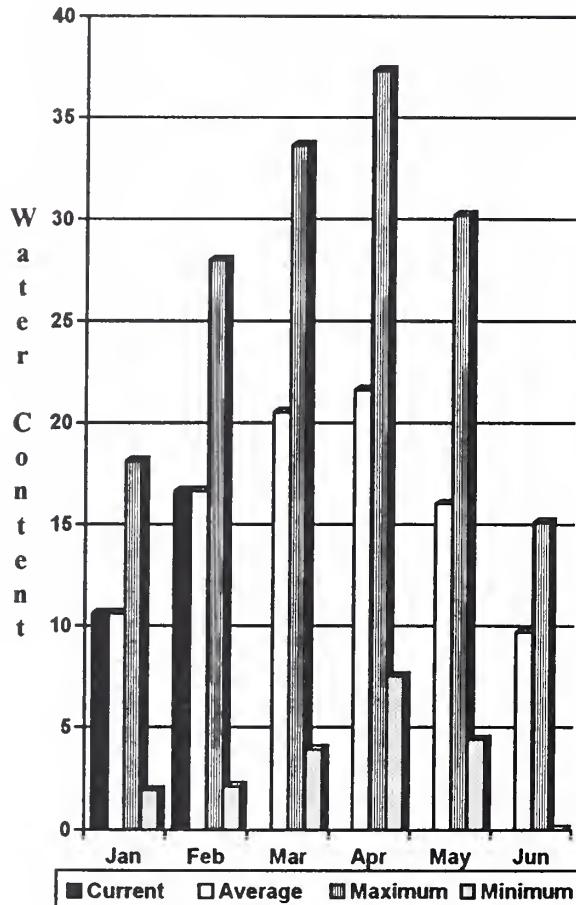
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

**Salmon Meadows SNOTEL**  
**Elevation 4500 ft.**

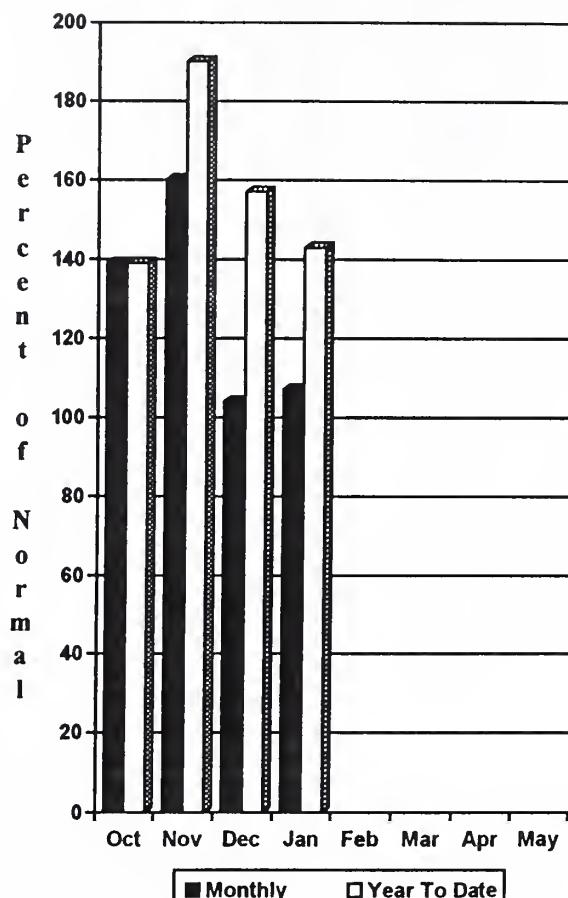


## Wenatchee - Chelan River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

Precipitation during January was 107% of normal in the basin and 143% for the year to date. Runoff for the Entiat River is forecast to be 119% of normal for the summer. The April-September forecast for the Chelan River is for 113%, for the Wenatchee River it is 106%, and 113% on the Stehekin. Icicle Creek is forecast to be 97% of normal this summer. Streamflow for January on the Chelan River was 156% of average and on the Wenatchee River it was 185% of normal. February 1 snowpack in the Wenatchee Basin was 90% of average, which is only 60% of last year. The Chelan Basin was 114% of average and Stemilt Creek was at 89% of normal. Snowpack in the Entiat River Basin was at 118% of average. Reservoir storage in Lake Chelan was 572,200 acre feet or 127% of February 1 average and 85% of capacity. Lyman Lake SNOTEL had the most snow water with 43.4 inches of water. This site normally has 39.0 inches and last year it had 54.2 inches on February 1.

For more information contact your local Natural Resources Conservation Service office.

**WENATCHEE - CHELAN RIVER BASINS**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point                     | Forecast Period | Future Conditions |                 |                                 |          |                 |                 |                        |
|------------------------------------|-----------------|-------------------|-----------------|---------------------------------|----------|-----------------|-----------------|------------------------|
|                                    |                 | <---- Drier ----- |                 | Chance Of Exceeding *           |          | Wetter ----->   |                 |                        |
|                                    |                 | 90%<br>(1000AF)   | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | (% AVG.) | 30%<br>(1000AF) | 10%<br>(1000AF) | 30-Yr Avg.<br>(1000AF) |
| CHELAN RIVER near Chelan           | APR-SEP         | 1135              | 1241            | 1312                            | 113      | 1383            | 1489            | 1160                   |
|                                    | APR-JUL         | 1041              | 1130            | 1190                            | 116      | 1250            | 1339            | 1024                   |
|                                    | APR-JUN         | 808               | 884             | 935                             | 115      | 986             | 1062            | 812                    |
| STEHEKIN near STEHEKIN             | APR-SEP         | 821               | 889             | 935                             | 113      | 981             | 1049            | 827                    |
|                                    | APR-JUL         | 716               | 769             | 806                             | 115      | 843             | 896             | 701                    |
|                                    | APR-JUN         | 544               | 589             | 620                             | 115      | 651             | 696             | 538                    |
| ENTIAT RIVER near Ardenvoir        | APR-SEP         | 228               | 253             | 270                             | 119      | 287             | 312             | 227                    |
|                                    | APR-JUL         | 207               | 230             | 245                             | 119      | 260             | 283             | 206                    |
|                                    | APR-JUN         | 169               | 189             | 202                             | 120      | 215             | 235             | 169                    |
| WENATCHEE at Plain                 | APR-SEP         | 1082              | 1188            | 1260                            | 106      | 1332            | 1438            | 1190                   |
|                                    | APR-JUL         | 1010              | 1088            | 1140                            | 106      | 1192            | 1270            | 1072                   |
|                                    | APR-JUN         | 821               | 877             | 915                             | 106      | 953             | 1009            | 864                    |
| WENATCHEE R. at Peshastin          | APR-SEP         | 1204              | 1541            | 1770                            | 108      | 1999            | 2336            | 1636                   |
|                                    | APR-JUL         | 1089              | 1393            | 1600                            | 108      | 1807            | 2111            | 1485                   |
|                                    | APR-JUN         | 890               | 1134            | 1300                            | 108      | 1466            | 1710            | 1204                   |
| STEMILT nr Wenatchee (miners in)   | MAY-SEP         | 84                | 112             | 131                             | 95       | 150             | 178             | 138                    |
| ICICLE CREEK nr Leavenworth        | APR-SEP         | 235               | 309             | 360                             | 97       | 411             | 485             | 370                    |
|                                    | APR-JUL         | 215               | 284             | 330                             | 97       | 376             | 445             | 340                    |
|                                    | APR-JUN         | 169               | 223             | 260                             | 96       | 297             | 351             | 270                    |
| COLUMBIA R. b1 Rock Island Dam (2) | APR-SEP         | 69476             | 77588           | 83100                           | 118      | 88612           | 96724           | 70485                  |
|                                    | APR-JUL         | 58788             | 65642           | 70300                           | 118      | 74958           | 81812           | 59736                  |
|                                    | APR-JUN         | 46500             | 51859           | 55500                           | 118      | 59141           | 64500           | 47007                  |

**WENATCHEE - CHELAN RIVER BASINS**  
**Reservoir Storage (1000 AF) - End of January**      **WENATCHEE - CHELAN RIVER BASINS**  
**Watershed Snowpack Analysis - February 1, 1996**

| Reservoir   | Usable Capacity |           |           | Usable Storage *** |                   |  | Watershed | Number of Data Sites | This Year as % of Last Yr | Average |
|-------------|-----------------|-----------|-----------|--------------------|-------------------|--|-----------|----------------------|---------------------------|---------|
|             | Capacity        | This Year | Last Year | Avg                |                   |  |           |                      |                           |         |
| CHELAN LAKE | 676.1           | 572.2     | 266.2     | 450.6              | Chelan Lake Basin |  | 5         | 86                   | 114                       |         |
|             |                 |           |           |                    | Entiat River      |  | 2         | 75                   | 118                       |         |
|             |                 |           |           |                    | Wenatchee River   |  | 12        | 65                   | 90                        |         |
|             |                 |           |           |                    | Squilchuck Creek  |  | 0         | 0                    | 0                         |         |
|             |                 |           |           |                    | Stemilt Creek     |  | 2         | 65                   | 89                        |         |
|             |                 |           |           |                    | Colockum Creek    |  | 1         | 45                   | 103                       |         |

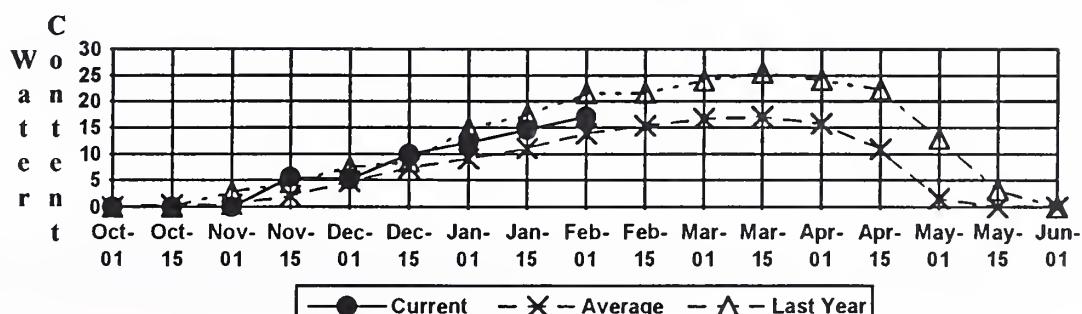
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

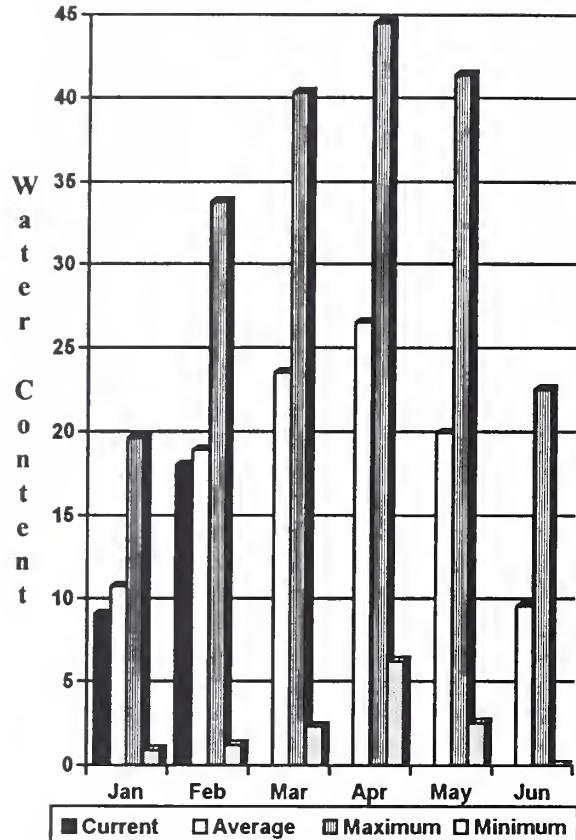
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

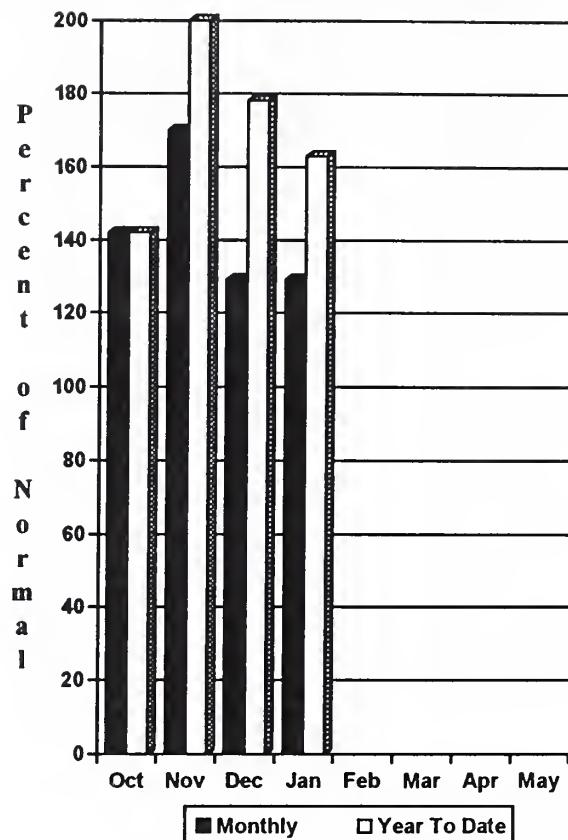
**Pope Ridge SNOTEL**  
**Elevation 3540 ft.**



Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

February 1 reservoir storage for the five major reservoirs was 816,400 acre feet, 127% of average. February 1 summer streamflow forecasts are for near to above normal in the Yakima Basin. Forecasts for the Yakima River at Cle Elum are for 109% of normal; Naches River, 112%; the Yakima River at Parker, 112%; Ahtanum Creek, 107%; and the Tieton River, 113%. The Klickitat River near Glenwood is forecast at 107% of normal flows this summer. January streamflows within the basin were; the Yakima River at Parker 196% of normal; the Yakima near Cle Elum, 167%; and the Naches River at 243%. February 1 snowpack was 91% based upon 21 snow courses and SNOTEL readings within the Yakima Basin. Precipitation was 129% of normal for January and 163% for the water year-to-date. Temperatures were 1.3 degrees above average for January. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U.S. Bureau of Reclamation's forecast for the total water supply available which includes irrigation return flow.

*For more information contact your local Natural Resources Conservation Service office.*

**YAKIMA RIVER BASIN**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point               | Forecast Period | <===== Drier ===== Future Conditions =====>===== |              |                              |          | Wetter   |          |          |
|------------------------------|-----------------|--|--------------|------------------------------|----------|----------|----------|----------|
|                              |                 | Chance Of Exceeding *                            |              | 30-Yr Avg.                   |          |          |          |          |
|                              |                 | 90% (1000AF)                                     | 70% (1000AF) | 50% (Most Probable) (1000AF) | (# AVG.) | (1000AF) | (1000AF) | (1000AF) |
| KEECHELUS LAKE INFLOW        | APR-JUL         | 111  | 125          | 135                          | 109      | 145      | 159      | 124      |
|                              | APR-SEP         | 118  | 133          | 144                          | 107      | 155      | 170      | 135      |
|                              | APR-JUN         | 99   | 110          | 118                          | 108      | 126      | 137      | 109      |
| KACHESS LAKE INFLOW          | APR-JUL         | 102  | 114          | 122                          | 110      | 130      | 142      | 111      |
|                              | APR-SEP         | 107  | 120          | 129                          | 109      | 138      | 151      | 118      |
|                              | APR-JUN         | 95   | 105          | 111                          | 112      | 117      | 127      | 99       |
| CLE ELUM LAKE INFLOW         | APR-JUL         | 402  | 437          | 460                          | 112      | 483      | 518      | 409      |
|                              | APR-SEP         | 421  | 462          | 490                          | 109      | 518      | 559      | 448      |
|                              | APR-JUN         | 338  | 366          | 386                          | 112      | 406      | 434      | 345      |
| YAKIMA at Cle Elum           | APR-JUN         | 694  | 757          | 800                          | 111      | 843      | 906      | 721      |
|                              | APR-JUL         | 801  | 875          | 925                          | 111      | 975      | 1049     | 832      |
|                              | APR-SEP         | 865  | 945          | 1000                         | 109      | 1055     | 1135     | 915      |
| BUMPING LAKE INFLOW          | APR-SEP         | 124  | 139          | 150                          | 110      | 161      | 176      | 136      |
|                              | APR-JUL         | 113  | 127          | 136                          | 110      | 145      | 159      | 124      |
|                              | APR-JUN         | 92   | 105          | 114                          | 110      | 123      | 136      | 104      |
| AMERICAN RIVER near Niles    | APR-SEP         | 95   | 108          | 116                          | 98       | 124      | 137      | 118      |
|                              | APR-JUL         | 88   | 99           | 107                          | 98       | 115      | 126      | 109      |
|                              | APR-JUN         | 72   | 83           | 90                           | 98       | 97       | 108      | 92       |
| RIMROCK LAKE INFLOW          | APR-SEP         | 228  | 253          | 270                          | 113      | 287      | 312      | 238      |
|                              | APR-JUL         | 194  | 214          | 227                          | 114      | 240      | 260      | 200      |
|                              | APR-JUN         | 157  | 172          | 183                          | 113      | 194      | 209      | 162      |
| NACHES near Naches           | APR-SEP         | 801  | 878          | 930                          | 112      | 982      | 1059     | 832      |
|                              | APR-JUL         | 738  | 805          | 850                          | 113      | 895      | 962      | 755      |
|                              | APR-JUN         | 638  | 696          | 735                          | 113      | 774      | 832      | 651      |
| AHTANUM CREEK nr Tampico (2) | APR-SEP         | 30   | 42           | 49                           | 107      | 57       | 68       | 46       |
|                              | APR-JUL         | 28   | 39           | 45                           | 108      | 52       | 63       | 42       |
|                              | APR-JUN         | 24   | 33           | 39                           | 108      | 45       | 54       | 36       |
| YAKIMA near Parker           | APR-SEP         | 1918   | 2110         | 2240                         | 112      | 2370     | 2562     | 1994     |
|                              | APR-JUL         | 1746   | 1918         | 2035                         | 113      | 2152     | 2324     | 1805     |
|                              | APR-JUN         | 1545   | 1691         | 1790                         | 112      | 1889     | 2035     | 1597     |
| KLICKITAT near Glenwood      | APR-JUN         | 96   | 109          | 117                          | 106      | 125      | 138      | 110      |
|                              | APR-SEP         | 120  | 138          | 150                          | 107      | 162      | 180      | 140      |

**YAKIMA RIVER BASIN**  
**Reservoir Storage (1000 AF) - End of January** | **YAKIMA RIVER BASIN**  
**Watershed Snowpack Analysis - February 1, 1996**

| Reservoir    | Usable Capacity | Usable Storage *** |           |       | Watershed     | Number of Data Sites | This Year as % of Last Yr | Average |
|--------------|-----------------|--------------------|-----------|-------|---------------|----------------------|---------------------------|---------|
|              |                 | This Year          | Last Year | Avg   |               |                      |                           |         |
| KEECHELUS    | 157.8           | 119.9              | 71.6      | 96.0  | Yakima River  | 20                   | 59                        | 91      |
| KACHESS      | 239.0           | 213.8              | 70.9      | 170.0 | Ahtanum Creek | 3                    | 47                        | 100     |
| CLE ELUM     | 436.9           | 326.9              | 103.1     | 251.0 |               |                      |                           |         |
| BUMPING LAKE | 33.7            | 14.3               | 15.4      | 9.0   |               |                      |                           |         |
| RIMROCK      | 198.0           | 141.5              | 78.7      | 115.0 |               |                      |                           |         |

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

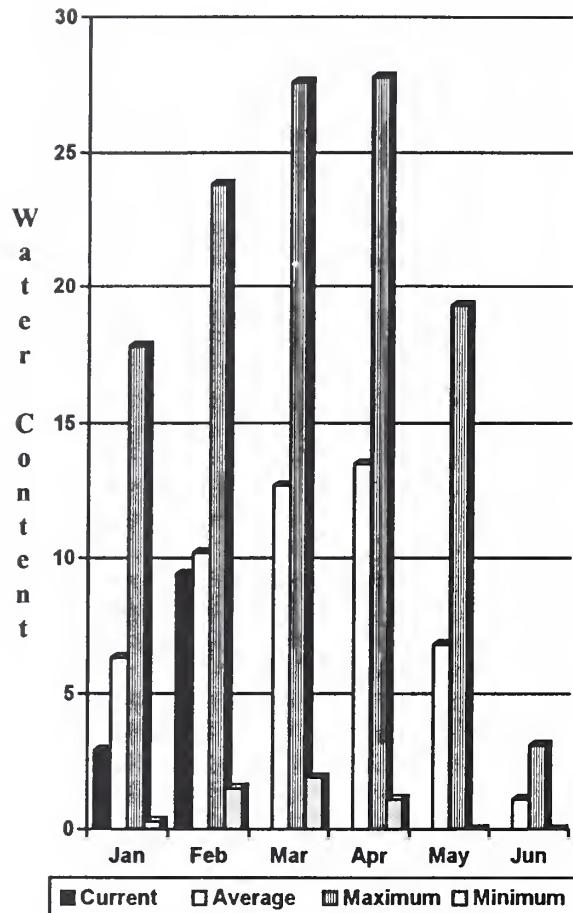
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

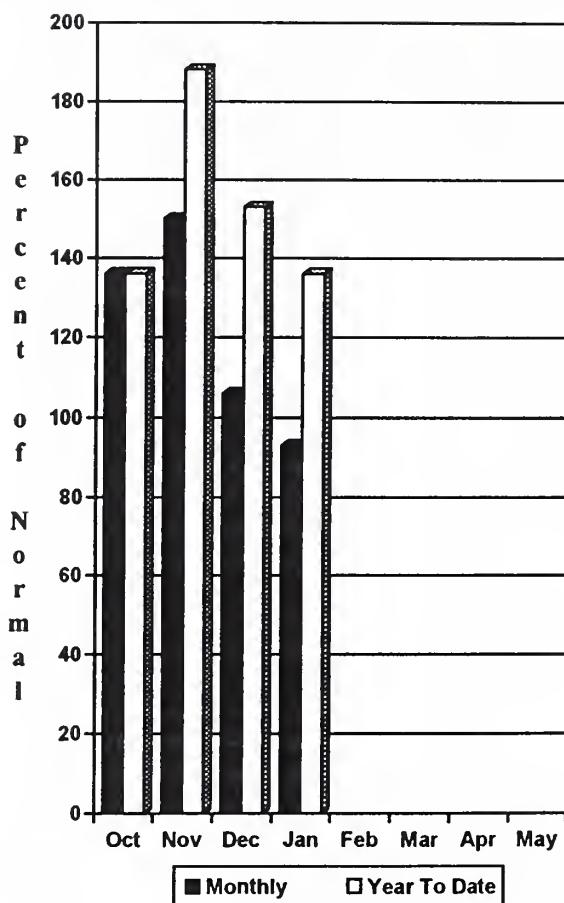
(2) - The value is natural flow - actual flow may be affected by upstream water management.

## Walla Walla River Basin

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

January precipitation was 93% of average, bringing the year-to-date precipitation to 136% of normal. February 1 snowpack was at 92% of normal up from 46% a month ago. The forecast is for 114% of average streamflow in the Walla Walla River for the coming summer, for the Grande Ronde at Troy, 117%, and 104% for Mill Creek. January streamflow was 186% of normal for the N.F. Walla Walla River, 137% for the Snake River, and 241% for the Grande Ronde River near Troy. The Touchet SNOTEL site had 18.8 inches of snow-water-equivalent, a 13 inch increase over the last month, the normal February 1 reading for this site is 20.8 inches.

**WALLA WALLA RIVER BASIN**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point                     | Forecast Period | Future Conditions  |                 |                                 |                 |                 |                 |       |
|------------------------------------|-----------------|--------------------|-----------------|---------------------------------|-----------------|-----------------|-----------------|-------|
|                                    |                 | <===== Drier ===== |                 | Chance Of Exceeding *           |                 | Wetter =====>   |                 |       |
|                                    |                 | 90%<br>(1000AF)    | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | 10%<br>(# AVG.) | 30%<br>(1000AF) | 10%<br>(1000AF) |       |
| GRANDE RONDE at Troy (1)           | MAR-JUL         | 1152               | 1542            | 1720                            | 117             | 1898            | 2288            | 1471  |
|                                    | APR-SEP         | 1016               | 1369            | 1530                            | 117             | 1691            | 2044            | 1312  |
| SNAKE blw Lower Granite Dam (1,2)  | APR-JUL         | 13985              | 20391           | 23300                           | 108             | 26209           | 32615           | 21650 |
|                                    | APR-SEP         | 15831              | 23030           | 26300                           | 108             | 29570           | 36769           | 24360 |
| MILL CREEK at Walla Walla          | APR-SEP         | 9.6                | 14.4            | 17.7                            | 104             | 21              | 26              | 17.1  |
|                                    | APR-JUL         | 9.0                | 13.8            | 17.1                            | 101             | 20              | 25              | 16.9  |
|                                    | APR-JUN         | 9.0                | 13.8            | 17.0                            | 102             | 20              | 25              | 16.7  |
| SF WALLA WALLA nr Milton Freewater | APR-JUL         | 51                 | 57              | 62                              | 116             | 66              | 72              | 53    |
|                                    | APR-SEP         | 64                 | 71              | 76                              | 115             | 80              | 87              | 66    |
| COLUMBIA R. at The Dalles (2)      | APR-SEP         | 88730              | 101990          | 111000                          | 112             | 120010          | 133270          | 98982 |
|                                    | APR-JUL         | 76883              | 88206           | 95900                           | 113             | 103594          | 114917          | 84760 |
|                                    | APR-JUN         | 62514              | 71675           | 77900                           | 113             | 84125           | 93286           | 68925 |

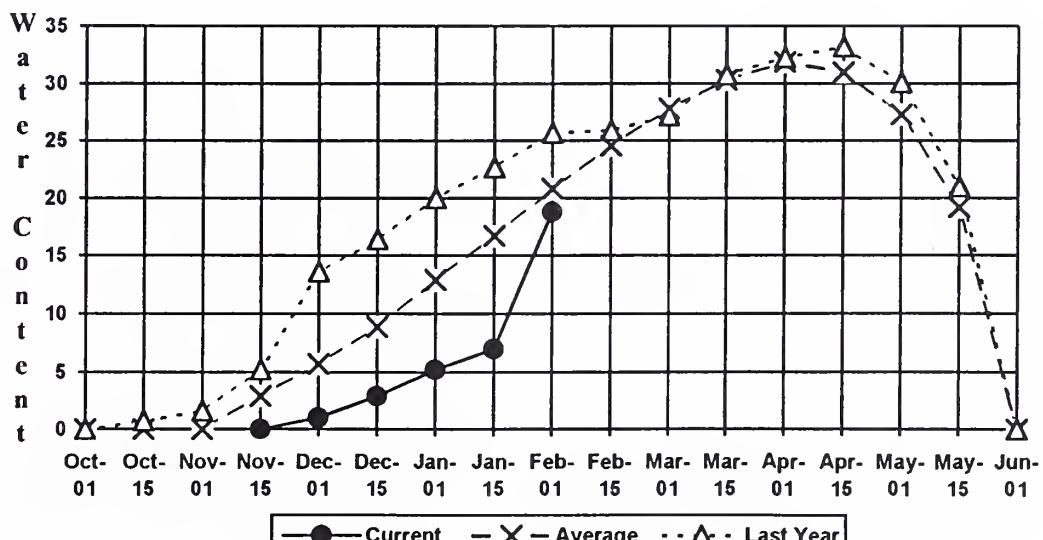
| WALLA WALLA RIVER BASIN                      |                 |                        | WALLA WALLA RIVER BASIN                        |                      |                   |
|--|-----------------|------------------------|--|----------------------|-------------------|
| Reservoir Storage (1000 AF) - End of January |                 |                        | Watershed Snowpack Analysis - February 1, 1996 |                      |                   |
| Reservoir                                    | Usable Capacity | *** Usable Storage *** | Watershed                                      | Number of Data Sites | This Year as % of |
|  | This Year       | Last Year              |  | Mill Creek           | Last Yr Average   |
|  |                 | Avg                    |  |                      |                   |
|  |                 |                        | Mill Creek                                     | 2                    | 69 92             |

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

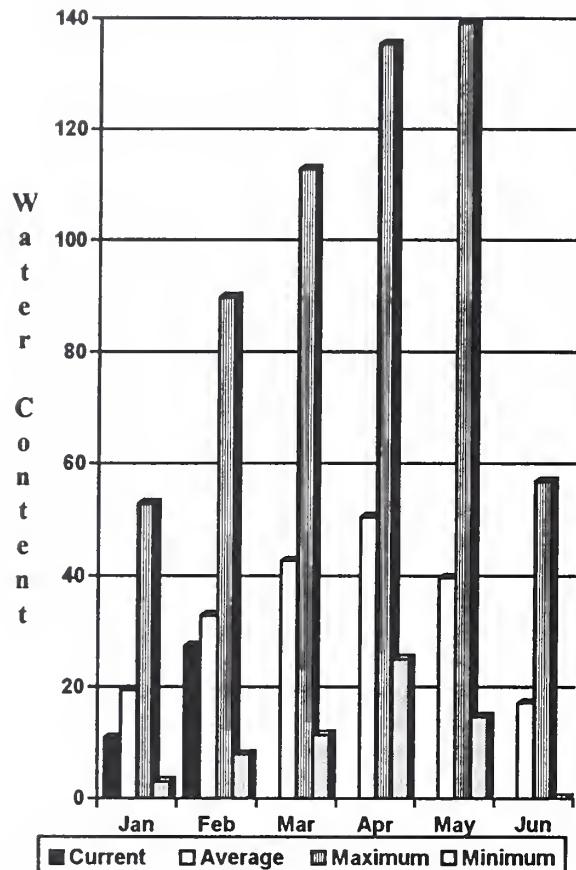
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

**Touchet #2 SNOTEL**  
**Elevation 5530 ft.**

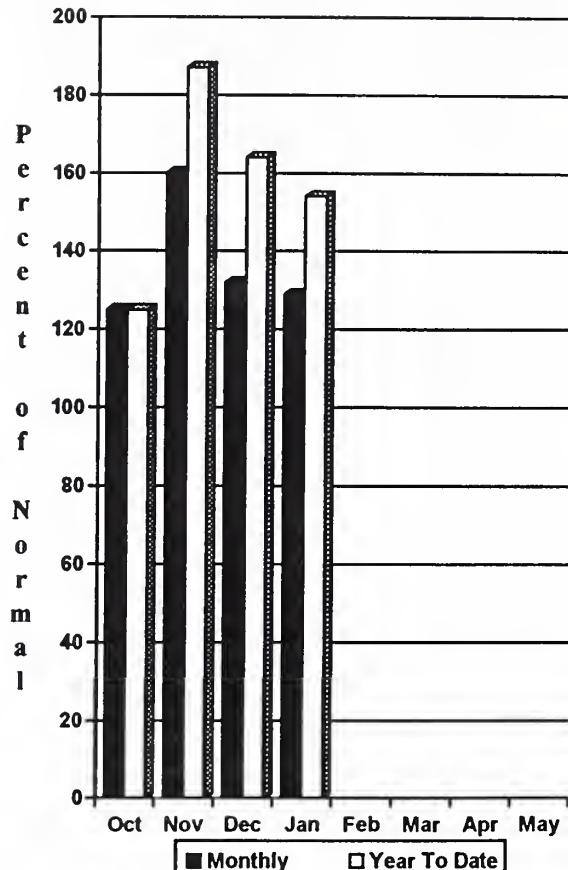


## Cowlitz - Lewis River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

The forecast for summer runoff in the Lewis River Basin is 105% of normal. The Cowlitz River at Castle Rock is forecast for 105% of normal runoff. January streamflow for the Cowlitz River was 148% of average, and 120% for the Lewis River. January precipitation was 129% of normal, 154% of average for the water-year. February 1 snow cover for the Cowlitz River was 95% and the Lewis River was 71% of average. The Paradise Park SNOTEL recorded the most water content for the basin with 40.2 inches of water. Normal February 1 water content is 38.5 inches.

**COWLITZ - LEWIS RIVER BASINS**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point                 | Forecast Period | Future Conditions  |                 |                                 |        |                 |                 | 30-Yr Avg.<br>(1000AF) |
|--------------------------------|-----------------|--------------------|-----------------|---------------------------------|--------|-----------------|-----------------|------------------------|
|                                |                 | <===== Drier ===== |                 | Chance Of Exceeding *           |        |                 | Wetter =====>   |                        |
|                                |                 | 90%<br>(1000AF)    | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | % AVG. | 30%<br>(1000AF) | 10%<br>(1000AF) |                        |
| LEWIS RIVER at Ariel (2)       | APR-SEP         | 803                | 1075            | 1260                            | 105    | 1445            | 1717            | 1204                   |
|                                | APR-JUL         | 702                | 939             | 1100                            | 105    | 1261            | 1498            | 1051                   |
|                                | APR-JUN         | 628                | 837             | 980                             | 105    | 1123            | 1332            | 933                    |
| COWLITZ R. b1 Mayfield Dam (2) | APR-SEP         | 887                | 1645            | 1980                            | 101    | 2315            | 3073            | 1970                   |
|                                | APR-JUL         | 1014               | 1446            | 1740                            | 101    | 2034            | 2466            | 1731                   |
|                                | APR-JUN         | 870                | 1239            | 1490                            | 101    | 1741            | 2110            | 1477                   |
| COWLITZ R. at Castle Rock (2)  | APR-SEP         | 1253               | 2454            | 2810                            | 105    | 3166            | 4347            | 2667                   |
|                                | APR-JUL         | 1682               | 2139            | 2450                            | 105    | 2761            | 3218            | 2325                   |
|                                | APR-JUN         | 1430               | 1823            | 2090                            | 105    | 2357            | 2750            | 1995                   |
| KLICKITAT near Glenwood        | APR-JUN         | 96                 | 109             | 117                             | 106    | 125             | 138             | 110                    |
|                                | APR-SEP         | 120                | 138             | 150                             | 107    | 162             | 180             | 140                    |

**COWLITZ - LEWIS RIVER BASINS**  
**Reservoir Storage (1000 AF) - End of January** | **COWLITZ - LEWIS RIVER BASINS**  
**Watershed Snowpack Analysis - February 1, 1996**

| Reservoir | Usable Capacity | Usable Storage *** |           |     | Watershed     | Number of Data Sites | This Year as % of Last Yr | This Year as % of Average |
|-----------|-----------------|--------------------|-----------|-----|---------------|----------------------|---------------------------|---------------------------|
|           |                 | This Year          | Last Year | Avg |               |                      |                           |                           |
|           |                 |                    |           |     | Cowlitz River | 7                    | 68                        | 95                        |
|           |                 |                    |           |     | Lewis River   | 4                    | 56                        | 71                        |

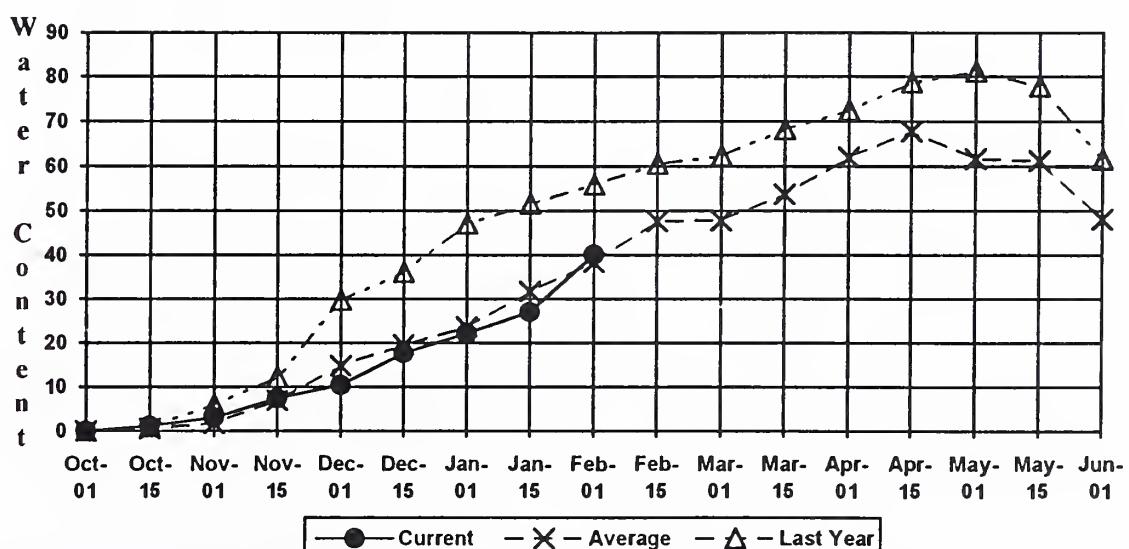
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

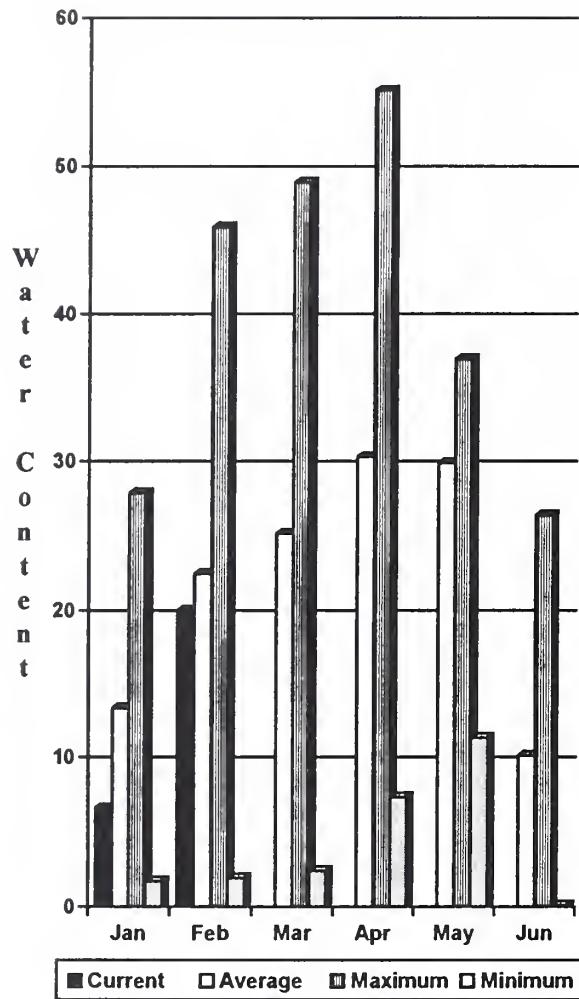
(2) - The value is natural flow - actual flow may be affected by upstream water management.

**Paridise SNOTEL**  
**Elevation 5120 ft.**

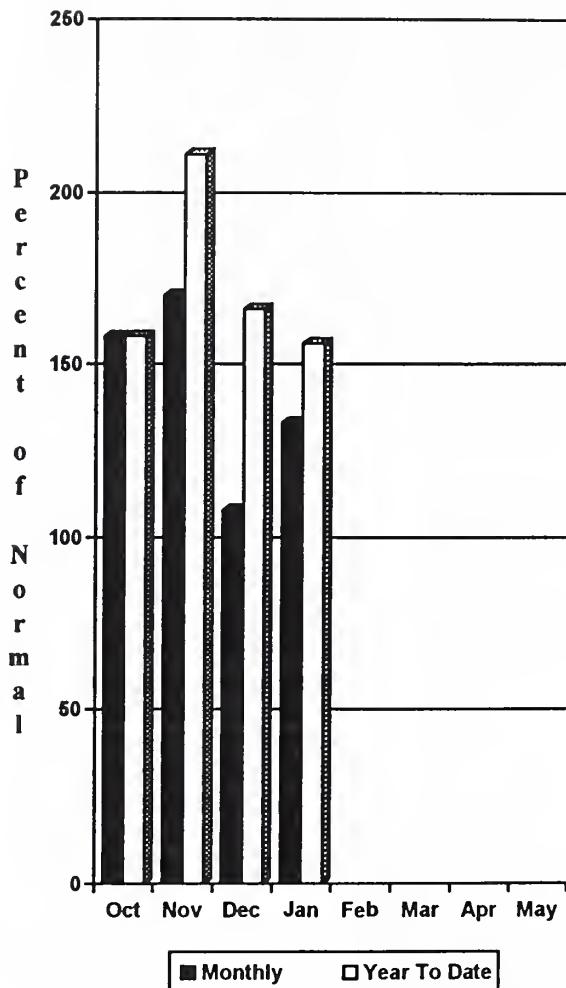


## White - Green - Cedar River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

Summer runoff is forecast to be 99% of normal for the Green River, and 92% for the Cedar River near Cedar Falls; 87% for the Rex River, 95% for the South Fork of the Tolt River, and 94% for the Cedar River at Cedar Falls. February 1 snowpack was 100% of normal in the White River Basin and 77% in the Green River Basin. Water content on February 1 at the Morse Lake SNOTEL, at an elevation of 5,400 feet, was 31.1 inches. This site has a February 1 average of 29.6 inches. January precipitation was 133% of normal, bringing the water year-to-date to 156% of average.

# WHITE - GREEN - CEDAR RIVER BASINS

## Streamflow Forecasts - February 1, 1996

| Forecast Point                      | Forecast Period | Future Conditions     |                 |                                 |          |                     |                 | 30-Yr Avg.<br>(1000AF) |  |
|-------------------------------------|-----------------|-----------------------|-----------------|---------------------------------|----------|---------------------|-----------------|------------------------|--|
|                                     |                 | <<===== Drier =====>> |                 | Chance Of Exceeding *           |          | ===== Wetter =====> |                 |                        |  |
|                                     |                 | 90%<br>(1000AF)       | 70%<br>(1000AF) | 50% (Most Probable)<br>(1000AF) | (% AVG.) | 30%<br>(1000AF)     | 10%<br>(1000AF) |                        |  |
| GREEN RIVER below Howard Hanson Dam | APR-JUL         | 196                   | 231             | 255                             | 99       | 279                 | 314             | 257                    |  |
|                                     | APR-SEP         | 221                   | 257             | 281                             | 99       | 305                 | 341             | 285                    |  |
|                                     | APR-JUN         | 176                   | 209             | 232                             | 99       | 255                 | 288             | 234                    |  |
| CEDAR RIVER near Cedar Falls        | APR-JUL         | 51                    | 63              | 71                              | 92       | 78                  | 90              | 77                     |  |
|                                     | APR-SEP         | 58                    | 70              | 78                              | 92       | 87                  | 99              | 85                     |  |
|                                     | APR-JUN         | 47                    | 57              | 63                              | 93       | 70                  | 80              | 68                     |  |
| REX RIVER near Cedar Falls          | APR-JUL         | 15.8                  | 20              | 24                              | 87       | 27                  | 31              | 27                     |  |
|                                     | APR-SEP         | 18.8                  | 23              | 26                              | 87       | 29                  | 33              | 30                     |  |
|                                     | APR-JUN         | 15.5                  | 19.3            | 22                              | 87       | 24                  | 28              | 25                     |  |
| CEDAR RIVER at Cedar Falls          | APR-JUL         | 48                    | 65              | 77                              | 94       | 89                  | 106             | 82                     |  |
|                                     | APR-SEP         | 50                    | 67              | 78                              | 94       | 89                  | 106             | 83                     |  |
|                                     | APR-JUN         | 49                    | 65              | 75                              | 94       | 86                  | 101             | 80                     |  |
| SOUTH FORK TOLT near Index          | APR-JUL         | 11.1                  | 13.1            | 14.4                            | 95       | 15.7                | 17.7            | 15.2                   |  |
|                                     | APR-SEP         | 13.4                  | 15.5            | 16.9                            | 95       | 18.3                | 20              | 17.8                   |  |
|                                     | APR-JUN         | 9.5                   | 11.4            | 12.6                            | 96       | 13.8                | 15.7            | 13.1                   |  |

### WHITE - GREEN RIVER BASINS

#### Reservoir Storage (1000 AF) - End of January

### WHITE - GREEN RIVER BASINS

#### Watershed Snowpack Analysis - February 1, 1996

| Reservoir | Usable Capacity | *** Usable Storage *** |           |     | Watershed   | Number of Data Sites | This Year as % of Last Yr | This Year as % of Average |
|-----------|-----------------|------------------------|-----------|-----|-------------|----------------------|---------------------------|---------------------------|
|           |                 | This Year              | Last Year | Avg |             |                      |                           |                           |
|           |                 |                        |           |     | White River | 3                    | 59                        | 100                       |
|           |                 |                        |           |     | Green River | 6                    | 70                        | 78                        |
|           |                 |                        |           |     | Cedar River | 0                    | 0                         | 0                         |

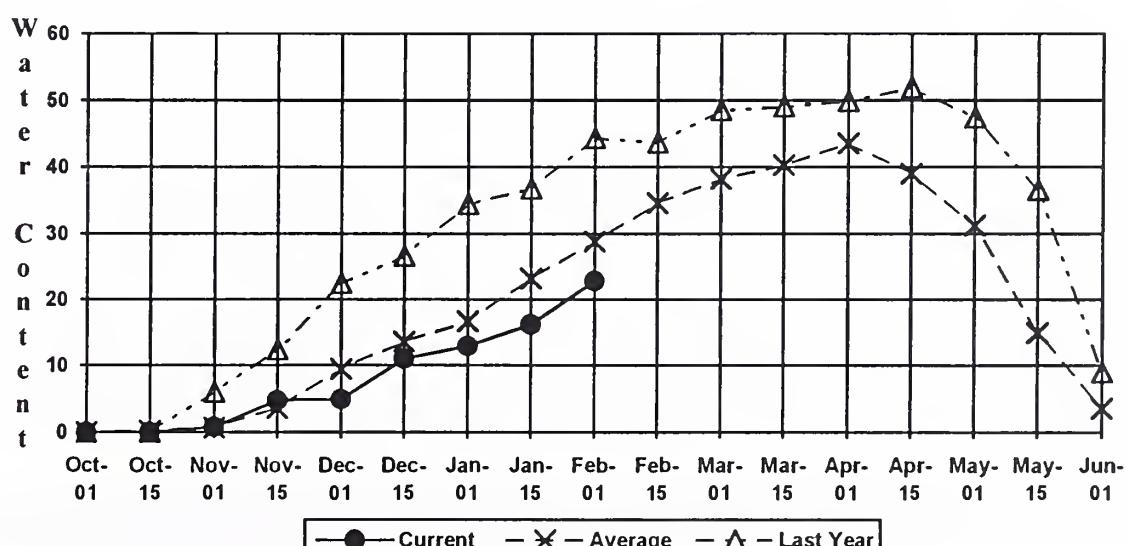
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.  
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

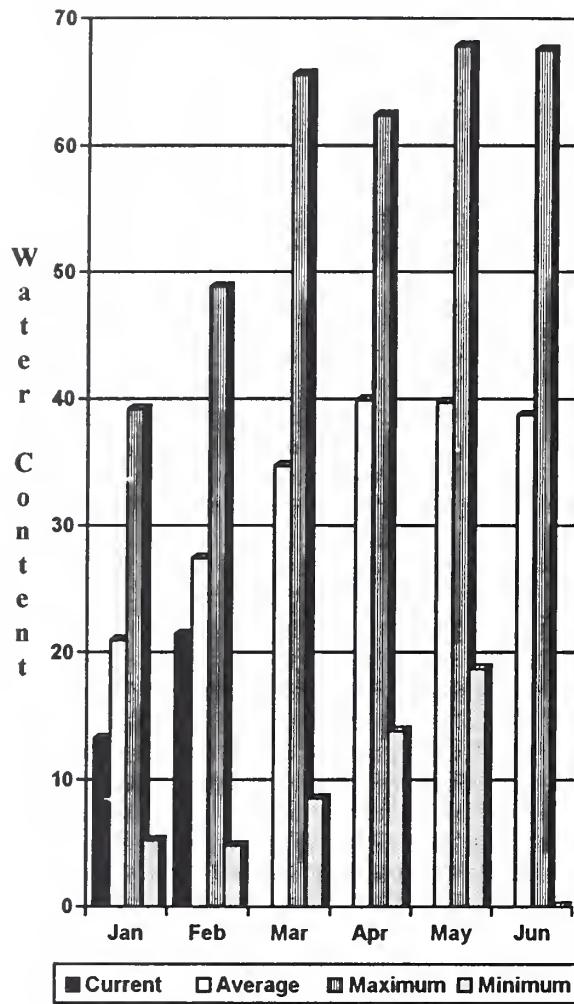
### Stampede Pass SNOTEL

#### Elevation 3860 ft.

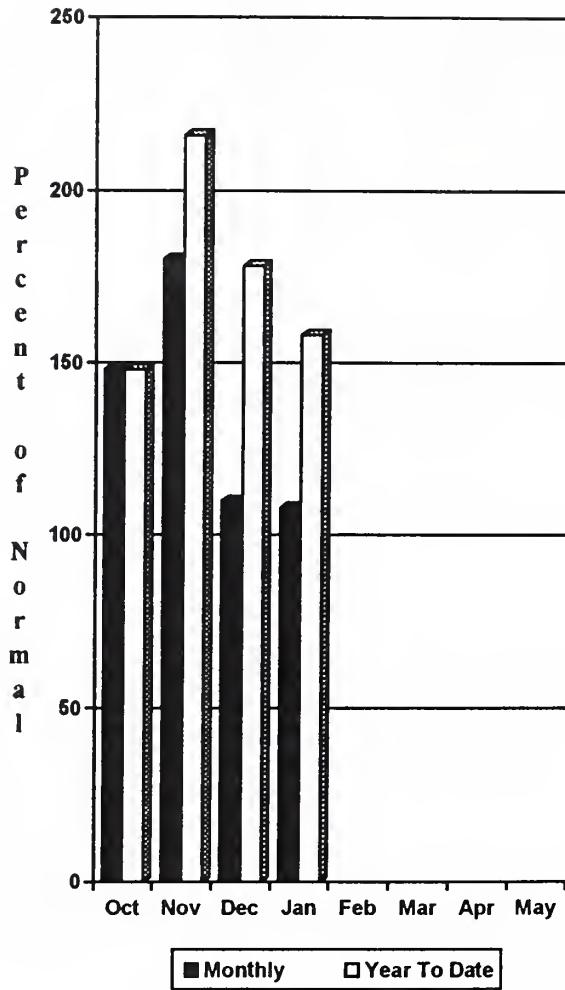


## North Puget Sound River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

Forecast for the Skagit River streamflow is for 95% of normal for the spring and summer periods. January streamflow in the Skagit River was 143% of average. Other forecast points included the Baker River at 91% and Thunder Creek at 96%. Basin-wide precipitation for January was 108% of average, bringing water-year-to-date to 158% of normal. February 1 snow cover in the Skagit River Basin was 90%, the Baker River Basin was, 66% and the Snohomish River Basin was 77% of average. Rainy Pass SNOTEL, at 4,780 feet, had 36.5 inches of water content. Normal February 1 water content is 24.5 inches. February 1 reservoir storage showed Ross Lake at 115% normal and 84% of capacity.

**NORTH PUGET SOUND RIVER BASINS**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point               | Forecast Period | <===== Drier ===== Future Conditions ===== Wetter =====> |              |                              |          |              |              |                     |
|------------------------------|-----------------|--|--------------|------------------------------|----------|--------------|--------------|---------------------|
|                              |                 | Chance Of Exceeding *                                    |              | 30% (1000AF)                 |          | 10% (1000AF) |              | 30-Yr Avg. (1000AF) |
|                              |                 | 90% (1000AF)   | 70% (1000AF) | 50% (Most Probable) (1000AF) | (% AVG.) | 30% (1000AF) | 10% (1000AF) |                     |
| THUNDER CREEK near Newhalem  | APR-JUL         | 188  | 205          | 216                          | 94       | 227          | 244          | 230                 |
|                              | APR-SEP         | 285  | 303          | 315                          | 96       | 327          | 345          | 328                 |
|                              | APR-JUN         | 112  | 129          | 140                          | 94       | 151          | 168          | 149                 |
| SKAGIT RIVER at Newhalem (2) | APR-SEP         | 1586   | 1880         | 2080                         | 95       | 2280         | 2574         | 2185                |
|                              | APR-JUL         | 1327   | 1573         | 1740                         | 95       | 1907         | 2153         | 1830                |
|                              | APR-JUN         | 1026   | 1213         | 1340                         | 95       | 1467         | 1654         | 1410                |
| BAKER RIVER near Concrete    | APR-JUL         | 645  | 719          | 770                          | 92       | 821          | 895          | 836                 |
|                              | APR-SEP         | 820  | 911          | 973                          | 91       | 1035         | 1126         | 1064                |
|                              | APR-JUN         | 472  | 536          | 579                          | 95       | 622          | 686          | 611                 |

**NORTH PUGET SOUND RIVER BASINS**  
**Reservoir Storage (1000 AF) - End of January** | **NORTH PUGET SOUND RIVER BASINS**  
**Watershed Snowpack Analysis - February 1, 1996**

| Reservoir        | Usable Capacity | *** Usable Storage *** |           |     | Watershed       | Number of Data Sites | This Year as % of Last Yr | Average |
|------------------|-----------------|------------------------|-----------|-----|-----------------|----------------------|---------------------------|---------|
|                  |                 | This Year              | Last Year | Avg |                 |                      |                           |         |
| ROSS             | NO REPORT       |                        |           |     | Snohomish River | 4                    | 53                        | 77      |
| DIABLO RESERVOIR | NO REPORT       |                        |           |     | Skagit River    | 13                   | 75                        | 90      |
| GORGE RESERVOIR  | NO REPORT       |                        |           |     | Baker River     | 9                    | 60                        | 66      |

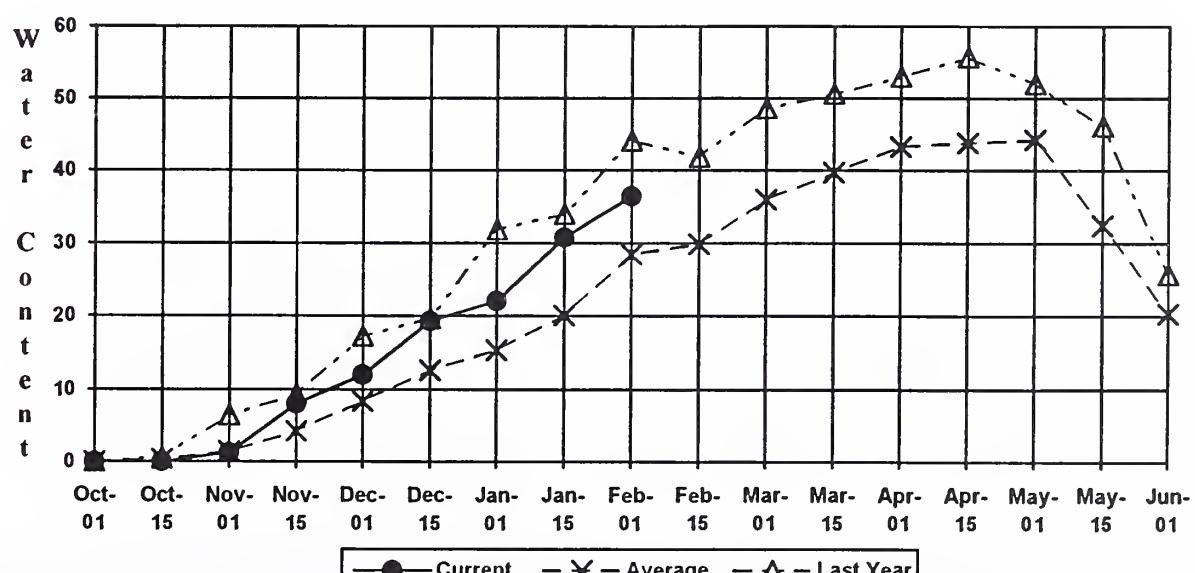
\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

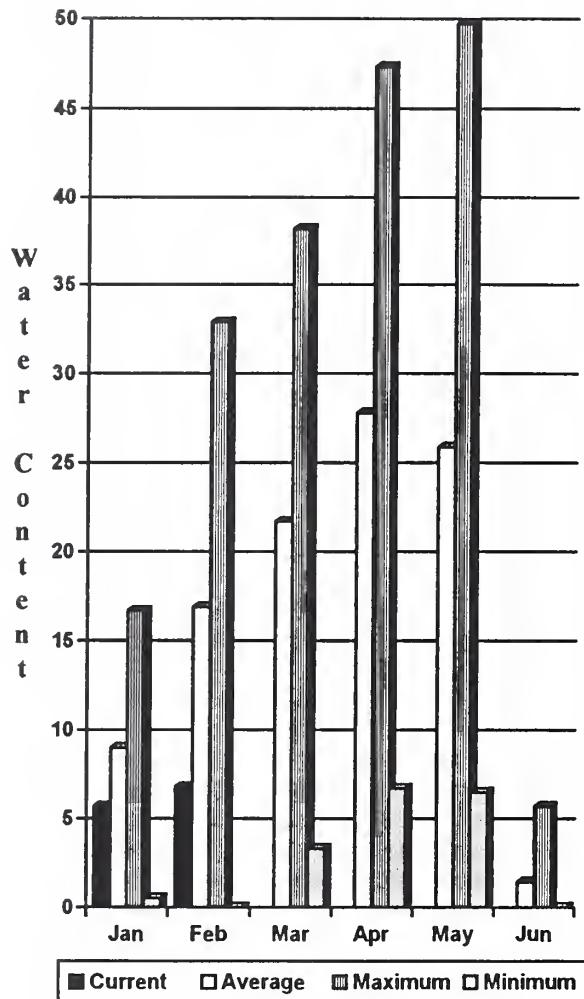
**Rainy Pass SNOTEL**  
**Elevation 4780 ft.**



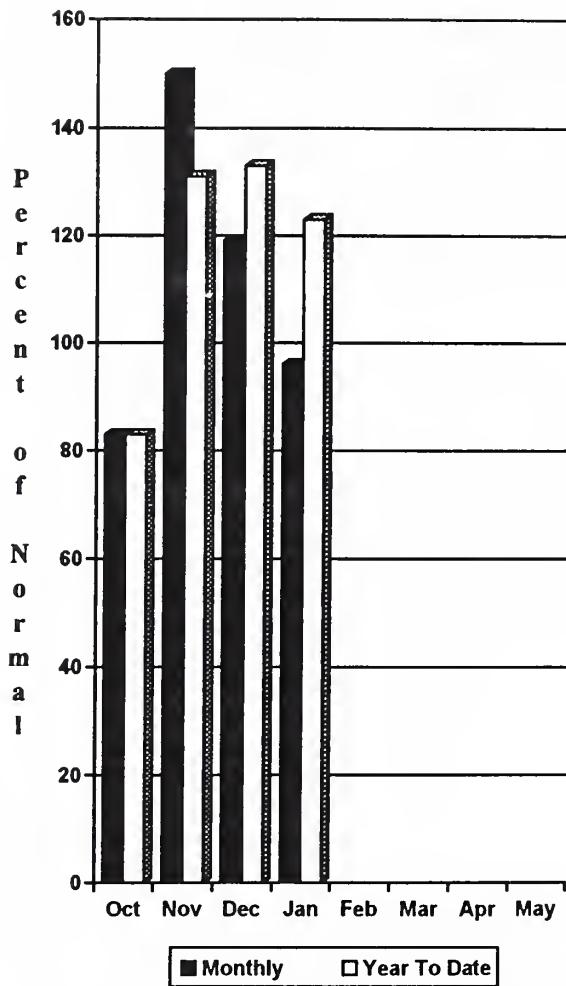
—●— Current —×— Average —△— Last Year

# Olympic Peninsula River Basins

Mountain Snowpack\* (inches)



Precipitation\* (% of normal)



\*Based on selected stations

February forecasts of runoff for streamflow in the Dungeness River Basin is 94% of average, and the Elwha River is forecasted for 88% of average. The Big Quilcene can expect near normal runoff this summer also. January precipitation was 96% of average. Precipitation has accumulated at 123% of normal for the water year. January precipitation at Quillayute was 13.9 inches, which is slightly below normal at 95% of average. Average February 1 snow cover in the Olympic Basin was much below average at 40%. The Mount Crag SNOTEL near Quilcene had 10.3 inches of snow-water-equivalent on February 1, normal for this site is 16.9 inches.

For more information contact your local Natural Resources Conservation Service office.

**OLYMPIC PENINSULA RIVER BASINS**  
**Streamflow Forecasts - February 1, 1996**

| Forecast Point              | Forecast Period | <===== Drier ===== Future Conditions ===== Wetter =====> |     |              |    |                                       |     |                           |  |                     |
|-----------------------------|-----------------|--|-----|--------------|----|---------------------------------------|-----|---------------------------|--|---------------------|
|                             |                 | 90% (1000AF)   |     | 70% (1000AF) |    | 50% (Most Probable) (1000AF) (# AVG.) |     | 30% (1000AF) 10% (1000AF) |  | 30-Yr Avg. (1000AF) |
|                             |                 | 118  | 137 | 150          | 94 | 163                                   | 182 |                           |  |                     |
| DUNGENESS RIVER nr Sequim   | APR-SEP         | 118  | 137 | 150          | 94 | 163                                   | 182 | 160                       |  |                     |
|                             | APR-JUL         | 97   | 113 | 123          | 94 | 133                                   | 149 | 131                       |  |                     |
|                             | APR-JUN         | 73   | 84  | 92           | 94 | 100                                   | 111 | 98                        |  |                     |
| ELWHA RIVER nr Port Angeles | APR-SEP         | 330  | 396 | 440          | 88 | 484                                   | 550 | 502                       |  |                     |
|                             | APR-JUL         | 280  | 334 | 370          | 89 | 406                                   | 460 | 417                       |  |                     |

**OLYMPIC PENINSULA RIVER BASINS**  
**Reservoir Storage (1000 AF) - End of January**

**OLYMPIC PENINSULA RIVER BASINS**  
**Watershed Snowpack Analysis - February 1, 1996**

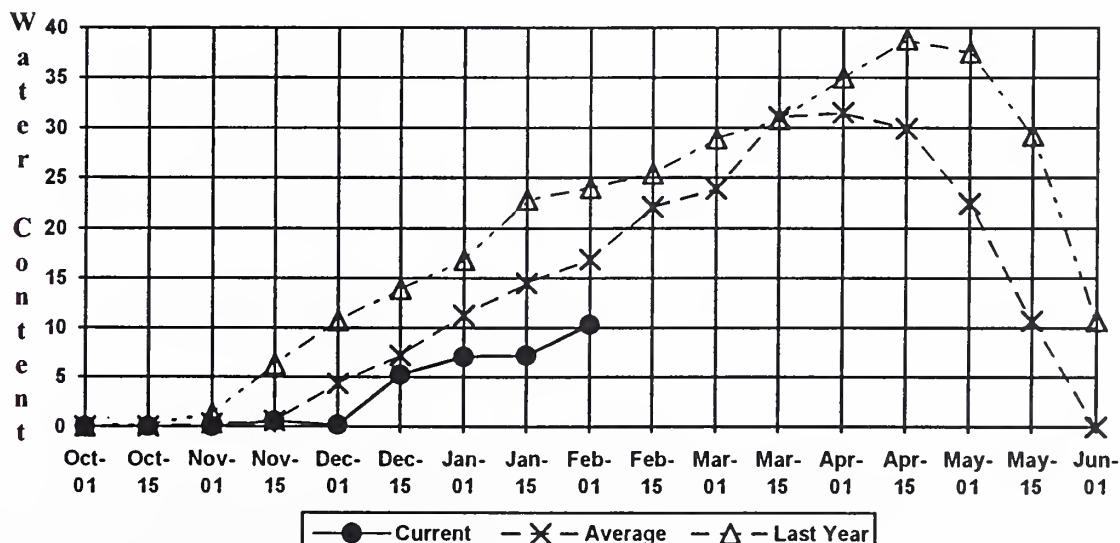
| Reservoir | Usable Capacity | *** Usable Storage *** |           |     | Watershed       | Number of Data Sites | This Year as % of |         |
|-----------|-----------------|------------------------|-----------|-----|-----------------|----------------------|-------------------|---------|
|           |                 | This Year              | Last Year | Avg |                 |                      | Last Yr           | Average |
|           |                 |                        |           |     | Elwha River     | 1                    | 25                | 22      |
|           |                 |                        |           |     | Morse Creek     | 1                    | 38                | 43      |
|           |                 |                        |           |     | Dungeness River | 1                    | 40                | 33      |
|           |                 |                        |           |     | Quilcene River  | 1                    | 43                | 61      |
|           |                 |                        |           |     | Wynoochee River | 0                    | 0                 | 0       |

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

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 (2) - The value is natural flow - actual flow may be affected by upstream water management.

**Mount Crag SNOTEL**  
**Elevation 4050 ft.**



# FOR ADDITIONAL INFORMATION

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## Olympic Peninsula River Basins

*Issued by*

*Released by*

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**Spokane, Washington**

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## **The Following Organizations Cooperate With the Natural Resources Conservation Service in Snow Survey Work\*:**

**Canada**

Ministry of the Environment  
Investigations Branch, Victoria, British Columbia

**State**

Washington State Department of Ecology  
Washington State Department of Natural Resources

**Federal**

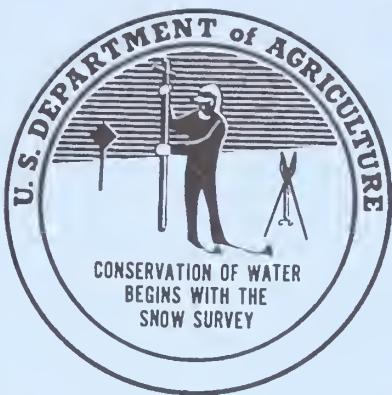
Department of the Army  
Corps of Engineers  
U.S. Department of Agriculture  
Forest Service  
U.S. Department of Commerce  
NOAA, National Weather Service  
U.S. Department of Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Geological Survey  
National Park Service  
Bureau of Indian Affairs

**Local**

City of Tacoma  
City of Seattle  
Chelan County P.U.D.  
Pacific Power and Light Company  
Puget Sound Power and Light Company  
Washington Water Power Company  
Snohomish County P.U.D.  
Colville Confederated Tribes  
Spokane County  
Yakama Indian Nation

**Private**

Okanogan Irrigation District  
Wenatchee Heights Irrigation District  
Newman Lake Homeowners Association



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Spokane, WA

